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GROUND WOOD
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PULP STONES

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NEW YORK
33 EST 42nd STREET

PAPER
PRINTING PAPER
of
EVERY DESCRIPTION

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., Inc.

LESLIE R. PALMER, President — GEO. S. MACDONALD, Vice-President & Treas. — F. K. HOPPIE, Secretary

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Boston Office: Room 37, 127 President St., Boston, Mass.

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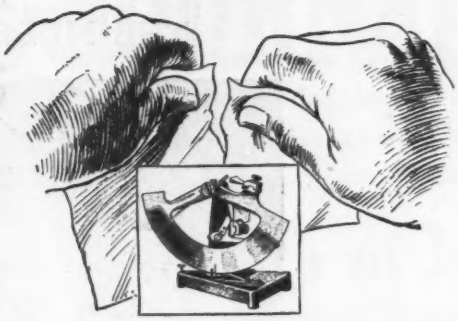

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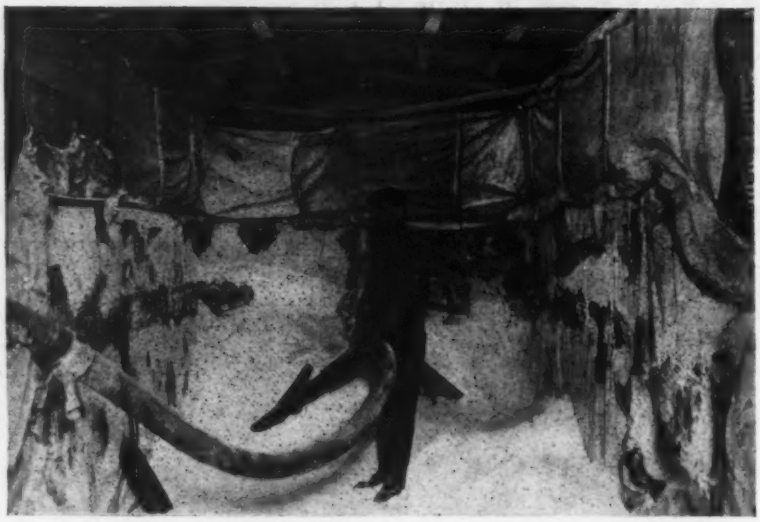
PULVERIZED CLAYS

THE MODERN PAPER FILLERS



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our BLUE RIDGE PULVERIZED CLAY

and

our McNAMEE SUPERFINE PULVERIZED CLAY

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This conversion is not partial but covers their entire requirements.
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Aren't the benefits suggested above worthy of practical investigation?
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Try a car or two before closing. It will certainly pay.

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ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXXI. No. 10 — Thursday, September 3, 1925

The Magazine of the Paper Industry

Pulp and Paper Production For Month of July

Report of Identical Mills to American Paper and Pulp Association Showed Decrease of 1 Per Cent as Compared With June Production—All But Four Grades Participated in Decrease —Production in Net Tons Totalled 458,263 While Stock on Hand at Close of Month Totalled 258,754 Net Tons—Wood Pulp Figures.

The July production of paper in the United States as reported by identical mills to the American Paper and Pulp Association and co-operating organizations, showed a decrease of 1 per cent as compared with June's production, following a 0.5 per cent increase in June over May, according to the Association's Monthly Statistical Summary of Pulp and Paper Industry. All grades showed a decrease in production as compared with June, with four exceptions.

The Summary is prepared by the American Paper and Pulp Association as the central organization of the paper industry, in co-operation with the Binders Board Manufacturers Association, Converting Paper Mills Association, Cover Paper Association, News Print Service Bureau, Wrapping Paper Manufacturers Service Bureau and Writing Paper Manufacturers Association.

The figures for July for same mills as reported in June are:

Grade	Number of Mills	Production Net Tons	Shipments Net Tons	Stocks on Hand End of Month Net Tons
News print	66	121,113	119,149	34,079
Book	62	82,905	80,917	45,369
Paperboard	100	117,752	114,548	38,050
Wrapping	78	48,858	51,798	59,203
Bag	23	7,879	8,492	7,224
Fine	82	28,114	29,327	40,001
Tissue	47	12,236	12,012	14,230
Hanging	8	2,392	2,764	2,463
Felts	19	18,887	19,006	3,304
Other Grades	63	18,127	17,761	14,830
Total—All Grades		458,263	455,774	258,754

During the same period, domestic wood pulp production decreased 11 per cent, this decrease being distributed over all grades, with three exceptions. The July totals (mills identical with those reporting in June) as reported by the American Paper and Pulp Association, are as follows:

Grade	Number of Mills	Production Net Tons	Used Net Tons	Shipments Net Tons	Stocks on Hand End of Month Net Tons
Groundwood Pulp	99	75,793	85,153	2,133	177,140
Sulphite News Grade	38	35,292	32,115	1,898	8,648
Sulphite Bleached	20	17,845	14,612	3,670	2,121
Sulphite Easy Bl.	6	3,403	2,464	454	1,798
Sulphite Mitscherlich	6	6,803	5,200	1,091	1,351
Sulphate Pulp	10	12,462	11,400	1,533	1,572
Soda Pulp	11	15,975	12,442	3,246	2,880
Other than Wood Pulp	2	27	47	—	32
Total—All Grades		167,600	163,433	14,025	195,542

To Start New Paper Mill at West DePere

APPLETON, Wis., September 1, 1925.—Construction is to start shortly on the foundation for a paper machine in the former boiler works of the J. F. Davis Sons Company in West DePere, Wis., and the manufacture of paper may be started within a few months, it was announced this week.

The paper machine, driers and other equipment have arrived at the plant and will be set up as quickly as possible by men in the employ of Maurice Miller, of Green Bay, who acquired the property about a year ago. Manufacture of toilet paper, crepe paper and toweling will be undertaken with one machine when it is erected. Later another machine will be installed, it is said. The paper machine is a Fourdrinier, 26 drier machine with a 72 inch trim. About 20 men will be employed when the first machine is started. An 800-feet water line will be laid from the channel of the Fox River to the plant.

Pulp for making paper will be supplied by the DePere Pulp and Paper Company which was started by Mr. Miller a few months ago. In order to increase production, one more large beater will be built on the second floor of this plant, which is located in a former flour mill.

This additional beater will give the company four beaters. An elevator will be installed to facilitate the handling of waste paper, from which pulp is made, and the finished pulp.

The waterwheels in the plant were overhauled recently and other repairs were made with the result that the efficiency was increased from 25 to 35 horsepower. The flooring in the fourth floor has been strengthened, and the other floors will be replaced later. A steam heating plant will be built on the property to furnish heat to the plant.

Harry Eurich Found Dead

[FROM OUR REGULAR CORRESPONDENT]

OTSEGO, Mich., September 1, 1925.—Harry Eurich, aged 50 years, superintendent of the MacSimBar and Wolverine Paper Company mills, was found dead below the balcony of his residence early Sunday morning, August 23. The cause of death is not known. Coroner Clay Benson's jury Sunday expressed a desire for more proof that the death was accidental. All day Monday, the coroner and Allegan County officials continued their investigations. What they found out was not revealed. Public opinion, however, seems to favor the theory of accidental death. The fact that there was no money in Eurich's pockets when he is known always to have carried considerable sums and the presence of so many injuries, however, leaves an opening for suspicion of murder.

The funeral services were held Wednesday of last week under the auspices of White Pigeon Masonic Lodge and were largely attended as Mr. Eurich was one of the city's most prominent residents.

Hammermill Agents Meet for Annual Conference

Fourteenth Annual Gathering at Erie, Pa., Has Program of Unusual Interest — Addresses Eliminated and Time Consumed in Discussion—Sport Features Inspire Some Lively Contests—Dr. Hugh P. Baker and E. H. Naylor Speakers at Thursday Evening Dinner

[FROM OUR SPECIAL CORRESPONDENT]

ERIE, Pa., August 28, 1925.—The fourteenth annual conference of Hammermill agents closed here today after a three days' session, today's meeting being of such importance as to keep the members in conference for an uninterrupted period of nearly six hours. These annual conferences of Hammermill agents were inaugurated in 1911 and at the time were looked upon as a most radical move by the industry to have a manufacturer meet as a body the distributors of his products and open up to them the inmost secrets of his business.

Time Given to Discussions

After the first conference the future success of the idea was fully assured and today Hammermill agents eagerly anticipate the dates set for the annual conference. Other paper manufacturers are today following out similar plans. So much of real value is developed at these conferences that not only one but several heads of the firms representnig the Hammermill lines attend, coming from the most distant points. A feature of this year's conference was the dispensing with addresses, except the welcoming address of President Ernst R. Behrend, thus giving the entire time of the business sessions to discussions. It is interesting here to note the increase in the production of the Hammermill plants since the holding of the first conference, which would indicate the benefits derived from these meetings.

Graphic Arts Exhibit

An unusual attraction at the conference was the Graphic Arts Exhibit which was shown through the courtesy of D. L. Ward of Philadelphia. It comprised fifty of the best pieces of printing produced in America during the past two years.

The new fall lines of Hammermill stationery made by White & Wyckoff Manufacturing Company of Holyoke, Mass., and new announcement cards produced by the Kellogg Division of the U. S. Envelope Co., of Springfield, Mass., were also exhibited. The strength and color of Hammermill Sulphite Bond was demonstrated by a sheet made twenty-four years ago. This sheet, weighing one-sixteenth of an ounce, supported an official weight of twenty-five pounds used by the city sealer of weights and measures in testing scales. This particular sheet of paper supported 6,400 times its own weight.

Speakers at the Dinner

The only speakers at the dinner given on Thursday evening were Dr. H. P. Baker, secretary of the American Paper and Pulp Association, whose topic was "What the Spruce Thinks of Its Being Converted Into Paper," and E. H. Naylor, secretary of the Writing Paper Manufacturers' Association, who spoke of the Good Will and high esteem which competitors entertain for the Hammermill Paper Company.

While the business sessions consumed the greater part of the three days, Thursday afternoon was given over to sports, golf, tennis, quoits and bowling on the green.

Winners at Sports

Valuable prizes were given the winners in each of the events, the following being the successful contestants: Thursday afternoon golf tournament—low gross score of 87, George L. Webb of New Haven, Conn.; low net score, B. E. Reeves of Rochester, N. Y.; second low net, Arthur Sherrill of Philadelphia, Pa.;

Putting contest, also won by B. E. Reeves, but as no contestant was allowed to win two prizes, the prize was given to E. A. Petrequin of Cleveland, Ohio, who had the second best score.

The tennis contest was won by E. C. Mead of Richmond, Va., the second prize going to Hubert L. Carter of Boston, Mass.

The other winners were:

Bowling on the Green—John R. Hauser, Durico Paper Company, Erie, Pa.

Quoits—F. J. Weissinger, Dudley Paper Company, Lansing, Mich.

Special prize was given to E. T. Mudge, 2nd, of the O. F. H.

GROUP PHOTOGRAPH TAKEN AT THE FOURTEENTH ANNUAL CONVENTI OF TH

Warner Company, Baltimore, for being runner-up in both Quoits and Bowling on the Green.

Friday afternoon golf tournament:—Low gross, R. S. Bull, Bradner Smith & Co., Chicago; Low net, Robert Johnston, Old Dominion Paper Company, Norfolk, Va.; Second low net, M. H. Moore. Clements Paper Company, Nashville, Tenn.; Putting contest, A. M. Miller, Central Ohio Paper Company, Columbus, Ohio.

Those in Attendance

Those attending the conference included the following:

J. A. Albrecht, Albrecht & Weaver, Buffalo, N. Y.

M. L. Kratz, The Alling & Cory Company, Buffalo, N. Y.

A. H. Smith and Alan Chandler, The Alling & Cory Company, Pittsburgh, Pa.

B. E. Reeves, The Alling & Cory Company, Rochester, N. Y.

D. F. McIntosh, American Paper Exports, New York City.

Dr. Hugh P. Baker, American Paper & Pulp Association, New York City.

R. P. Andrews, Wm. Schaefer, and W. M. Walsh, R. P. Andrews Paper Company, Washington, D. C.

Chas. J. Babcock and Hugo Parton, George Batten Company, New York City.

R. L. Tillman, Beacon Paper Company, St. Louis, Mo.

Harold Helmer, Beecher, Peck & Lewis, Detroit, Mich.

E. H. Taylor, Beekman Paper & Card Company, New York City.

W. J. Herrmann and Frank M. Smith, E. A. Bouer Company, Milwaukee, Wis.

C. E. Roach, Capital City Paper Company, Springfield, Ill.

H. L. Carter, Carter, Rice & Company, Boston, Mass.

F. K. Williams, Caskie-Dillard Company, Lynchburg, Va.

A. M. Miller, Central Ohio Paper Company, Columbus, Ohio.

James Nelson, Central-Topeka Paper Company, Topeka, Kansas.

M. H. Moore, Clements Paper Company, Nashville, Tenn.

Frank E. Floyd and Fred F. Fox, Crescent Paper Company, Indianapolis, Ind.

Edw. Joos, Jr., Diem & Wing Paper Company, Birmingham, Ala.

Paul A. Stuhlreyer and Wm. O'Hara, Diem & Wing Paper Company, Cincinnati, Ohio.

J. A. King, Dobler & Mudge, Baltimore, Md.

F. J. Weissinger, Dudley Paper Company, Lansing, Mich.

P. M. Duggan, J. R. Hauser, and G. J. Kuebel, Durico Paper Company, Erie, Penna.

E. R. Carpenter, Dwight Bros. Paper Company, Grand Rapids, Mich.

T. H. Epes, Epes-Fitzgerald Paper Company, Richmond, Va.

Geo. McKinney, A. E. Shaw, and A. C. Thomas, F. A. Flinn, Inc., New York City.

T. C. Gregory, R. L. Greene Paper Company, Providence, R. I.

J. A. House, Guardian Trust Company, Cleveland, Ohio.

Wm. R. Grazelle and Fred Stutzman, Holland Paper Company, Buffalo, N. Y.

Wm. H. Howe and Frank Howe, Wm. H. Howe, Buffalo, N. Y.

S. T. Jones, J. B. Binley, and E. J. Cooper, Hudson Valley Paper Company, Albany, N. Y.

H. G. Oelklaus, Irwin Paper Company, Quincy, Ill.

Walter Johnston, Johnston Paper Company, Harrisburg, Penna.

J. A. Carpenter, Kansas City Paper House, Kansas City, Mo.

R. L. Allison, E. L. Wood, and N. J. Patterson, P. P. Kellogg & Co. Div., Springfield, Mass.

Spencer Lathrop and Thos. S. Lathrop, Lasher & Lathrop, Inc., New York City.

John Leslie and Donald Leslie, John Leslie Paper Company, Minneapolis, Minn.

W. H. Stuart and G. H. Londergan, Henry Lindenmeyer & Sons, New York City.

C. E. Mack, Mack-Elliott Paper Company, St. Louis, Mo.

S. Guy Megargee, Megargee Bros., Scranton, Penna.

Wm. E. Sayle, National Envelope Company, Waukegan, Ill.

Geo. A. Matthews, New Haven Paper Company, New Haven, Conn.

R. S. Johnston, Old Dominion Paper Company, Norfolk, Va.

W. G. Cleveland, E. C. Palmer & Co., Ltd., New Orleans, La.

Petrequin, Petrequin Paper Company, Cleveland, Ohio.

T. J. Keenan, New York.

L. D. Post, New York.

E. A. Petrequin, Petrequin Paper Company, Cleveland, Ohio.

T. H. Fort, Thos. W. Price Company, Philadelphia, Penna.

F. P. Scamman, C. M. Rice Paper Company, Portland, Me.

W. A. Rhodes, S. P. Richards Company, Atlanta, Ga.

E. C. Mead, Richmond Paper Company, Richmond, Va.

James McCracken, W. Predmore, and A. B. Sherrill, Riegel & Company, Inc., Philadelphia, Penna.

Wm. H. Rourke, Rourke-Eno Paper Company, Hartford, Conn.

M. D. McAlpine, R. S. Bull, and R. Wadsworth, Bradner Smith & Company, Chicago, Ill.

G. R. Likins, Springfield Paper Company, Springfield, Mo.

(Continued on page 43)

OF THE HAMMERMILL AGENTS, HELD AT ERIE, PA., ON AUGUST 26, 27 AND 28

Philadelphia Looks For Better Business Soon

While Present Demands for Paper Are Not Impressive All the Indications Are That the Early Days of Fall Will Witness a General Improvement — Better Demand For Coarse Papers With Slight Advances in Some Lines—Simon Walter Welcomed Home

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, August 31, 1925.—Though present demands for papers are not impressive in so far as volume of orders is concerned there is however every indication that with the advent of the fall days a general improvement will prevail. There is reason to be optimistic in the outlook for the local industry in the vastly increased inquiries for September deliveries. The most pronounced improvement is noted in the coarse paper and stock divisions of the trade where already sufficient business is on hand to warrant the dealers' anticipations of broadening scope in demands as the September days approach.

Numerous Inquiries For Fine Papers

While there still is a dearth of orders from the smaller printing concerns where for the past month a decidedly quieter business has prevailed the closing days of August began to brighten materially through the renewed interest in the purchases of papers from these sources. Throughout the mid-summer months the chief demand in the fine paper business has been from the larger printing houses and publishers handling mill orders of books and other grades of papers used in the production of publication, advertising and catalogues. Now that the needs of the larger houses have been filled the smaller printers are coming into the market with small orders and frequent inquiries for all grades for future needs.

Coarse Papers Show Advance

That there is a healthier demand for all grades of coarse papers and particularly for krafts and screenings is indicated by the present position of the mills in their reports to the local jobbers on future shipments. Many of the larger kraft and screening manufacturers have sent out notice to the Quaker City trade that they will not be able to fill orders before November as there is sufficient volume of business on hand to consume all productions until that month. Krafts have been advanced by some of the larger mills ½ cent on small lots and ¼ cent in carloads. Screenings are advanced 1 cent per pound while box boards have jumped to $47.50 for chip and $50 for news, these being the prices quoted by the Philadelphia Paper Manufacturing Company which sometime ago announced that it had withdrawn all prices, the quotation at that time in late July being $42.50 and $45.

Paper Stock in Demand

Another evidence in the outlook for an improved paper market among the mills is that of the return of the manufacturers to the stock market. During the closing days of the month all grades of paper stocks and many of the rag lines were eagerly sought by the mills. There is very little material accumulated in the warehouses owing to the extreme quietness in the general industrial world for many months and consequently a scarcity of waste used by the paper manufacturing industry. Prices while holding to the quotations of last week are expected to advance with early September days.

Phil-Fibre Box Board Mills Improved

The Phil-Fibre Box Board Mills, Inc., manufacturers of card board and box boards, and located at Delaware avenue and Tasker street will close down on September 1st for extensive alterations to both the building and the equipment. The plant recently has been expanded by addition of a new screen house completely equipped with modern screening devices. During the three weeks shut down the entire machinery will be overhauled and new stokes, new boilers and other mechanical equipment installed to take the place of the present machines which will be removed. The Phil-Fibre Company now has several buildings on its larger acreage of ground devoted to its mills. Miss Esther Newman, secretary of the firm and daughter of President David Newman of the company announces that she will retire from active service with the mills during the coming winter and will enter the ranks of the newly-weds during the month of December. The business will be continued by her father and Vice President Chester Simmons and Treasurer Samuel Parris while Miss Newman will continue to hold the office of Secretary.

Hygenic Paper Service in Bankruptcy

An involuntary petition in bankruptcy was filed during the week against the Hygenic Paper Service Company, 322 N. 2nd street, dealers in sanitary paper products such as towels, napkins and toilets and other specialties. The creditors are the Independent Paper Mills, Inc., $84; Joseph Arons, $40 and the Embree Manufacturing Company, $576. The head of the Company is Charles Moskowitz.

Receivers Sale For Paper Mill Supplies

The assets of the United Paper Mills Supply Company, 4588 Merion avenue, were disposed of by receivers sale during the week. They consisted of 10 tons rags, 25 tons paper stock, 30 tons of scrap rubber and 25 tons of cotton waste and equipment running into a few thousand dollars. The company was placed in bankruptcy two weeks ago.

Simon Walter Welcomed Home

In a bower of summertime blossoms and with an office transformed into a veritable conservatory of palms, ferns and other greens, President Simon Walter of the S. Walter, Inc., 144 N. 5th street, was warmly greeted upon his return from an eight week tour of Europe by his associates in the firm and employees. President Walter, for more than 20 years one of the prominent of City Fathers, as Councilmanic Representative from his home district and Chairman of the Public Utilities and Transportations Committee, of City Councils, was assigned special emissary to the foreign governments by the Mayor of Philadelphia and the Sesqui-Centennial Exposition Committee to interest our neighbors across the seas in the coming celebration of the 150th anniversary of the signing of the Declaration of Independence, and in his round of the European countries called on the Government officials in Germany, Carlsbad, Paris, and London, extending them an invitation to the Sesqui and participation in its exhibits. He sailed for home last week on the Albert Ballin, arriving here on Monday when a special reception and welcome home was given in his honor by the officials of the firm and employees. On Monday evening a dinner party with many friends and business associates attending, was held at the Bellevue-Stratford when Vice-President Thomas F. Kennedy of the company on behalf of the firm and its staff presented him with a huge basket of gladioli and in a brief but warm word of welcome expressed the gladness of the associates in his return to the business family. On Tuesday when President Walter returned to his office at headquarters, he was presented with many floral tributes by the individual members of the staff and beneath a bower of fernery and palms and an attractively designed and hand painted large plaque bearing the "Welcome Home" greeting of his

38 associates started into the transaction of the accumulated business matters.

While abroad he also gave much time to the study of European traffic problems as part of his duties as City Councilman for the purpose of improving and extending the bus transportation programs, making an exhaustive survey of the London Tram Service, the largest in the world. Although the city mission was the most important of his itinerary while abroad he found a few hours leisure to enjoy a sail down the Rhine, to indulge in sight seeing pleasures of Paris, London, Carlsbad and other important centers in the countries visited but despite his pleasurable impressions returns to the Land of the Free glad that he was born under the Stars and Stripes and with a deeper love for the homeland. In going the rounds of the paper mills in France and Germany he made a survey of the conditions of the European paper markets of those countries and finds that America has very little to fear from competition of the foreign makers because of the high wages at present prevailing and which are expected to soar to higher levels as the year closes. While the higher wages now are chiefly confined to the French and German mills he believes and with the authority of the mills owners in these countries, that they will extend to all paper centers of Europe as conditions improve in the labor market. He found that the mills there have plenty of outlet in their own markets for their production and will not be so deeply concerned with exportation because of home demands and the high wages that will materially retard American consumption. For the purpose of future representation and distribution of high grade art papers in this country President Walter made preliminary plans for the importation of these specialties from German and French mills through his firm and although not engaging in their sales at this time because of the prevailing prices will at a later date add many grades to those already handled by his concern. Vice President Thomas F. Kennedy returned during the early part of the week from a round of the mills in New England stopping over at Lake Spofford in New Hampshire to visit his son Robert who is at summer camp in the region.

Paper Trade Meetings To Resume

Following the summer recess the paper trade will again resume its monthly meetings of both the fine paper and coarse division of the Philadelphia Paper Trade Association on Thursday, September 10, with the Fine Paper Dealers holding session at the Bourse Restaurant.

Phila. Dealers Attend Hammermill Convention

Three of the Philadelphia dealers handling the products of the Hammermill Paper Company were represented at the annual convention and meeting of the distributors for that mill held during the week. Those who journeyed from the Quaker City trade were George W. Ward, head of the D. L. Ward Company, Thomas R. Ford of the Thomas W. Price Company, and three members of Reigel and Company, Inc., including President Arthur B. Shefrill, Vice President Winfield Predmore and General Manager James McCracken.

Creditors of Osburn Paper Co. To Meet

There will be a meeting of the creditors of the Osburn Paper Company on September 15 in the offices of the Referee, Walter C. Douglas, Room 1318 Jefferson Building, 1015 Chestnut street, for the purpose of settling the claims of those who were involved in the bankruptcy proceeding against the firm. The Osburn Paper Company formerly was engaged in the fine paper business with offices in the Bourse.

Work on the line of the Abitibi Power and Paper Company for transmission of power from Iroquois Falls to Island Falls, is moving on splendidly. The towers are nearly all up and about half the distance is wired.

HAMMERMILL AGENTS MEET

(*Continued from page 41*)

W. F. McQuillen and W. B. Stevenson, Storrs & Bement Company, Boston, Mass.

G. L. Webb, Storrs & Bement Company, New Haven, Conn.

J. D. Swigart and Geo. Gould, Swigart Paper Company, Chicago, Ill.

A. D. Tayloe, Tayloe Paper Company, Memphis, Tenn.

G. W. VanAlstyne and J. D. Keating, Troy Paper Corporation, Troy, N. Y.

J. Nacht, H. Caplin, Union Card and Paper Company, New York City.

E. V. Johnson, U. S. Envelope Company, Springfield, Mass.

W. E. Swift and James Logan, U. S. Envelope Company, Worcester, Mass.

C. R. Smith, Van Reed Paper Company, Reading, Penna.

A. C. Damon, Paul E. Vernon & Company, New York City.

Chas. Walden, Jr., New York City.

Geo. Ward, D. L. Ward Company, Philadelphia, Penna.

E. T. Mudge, 2nd, O. F. H. Warner & Company, Baltimore, Md.

W. A. Patterson, Western Newspaper Union, Chicago, Ill.

J. B. Jones and Geo. S. Johnston, Western Paper Company, Omaha, Neb.

A. H. Sampson, White & Wyckoff Mfg. Company, Holyoke, Mass.

Mark D. Wilson, R. D. Wilson Sons & Company, Clarksburg, W. Va.

E. H. Naylor, Writing Paper Mfgrs. Association, Springfield, Mass.

H. L. Zellerbach and L. A. Colton, Zellerbach Paper Company, San Francisco, Calif.

A. A. Tanyane, PAPER TRADE JOURNAL, New York.

New York Salesmen Play Golf Finals

The New York Division of the Salesmen's Association of the Paper Industry played the finals for the Outterson Cup at the White Beeches Golf Club, Haworth, N. J., on August 25. They were the guests of R. C. Tilden, vice president of the New York Division.

The attendance was quite surprising as it is difficult to get out a large number of men during the latter part of August when so many are on vacations, and at a time when the summer slump is about over and salesmen are preparing for fall business. But the interest in the finals for the Outterson Cup, as well as the outing of the association, called them away from their desks and taking of orders was suspended for the afternoon.

Most of the salesmen motored to the attractive club just north of Englewood, where twenty-two sat down for lunch. The usual round table discussion was dispensed with and instead each man was called upon to tell his most successful order-taking story. A suggestion that this system be adopted at the association lunches met with hearty approval. After lunch the team and alternates played eighteen holes over an interesting course, which by good fortune, was in excellent condition.

It is impossible to report the scores as these are not to be divulged until after all the scores are checked and the scores of the other divisions are opened and read at the same time. There was a large range of scores but Chairman Peck, of the Golf Committee, is confident that it will not be necessary to insure the cup while sending it to another city. The only one unfortunate occurrence was that the sweep stakes was won by a guest and not by one of the members of the association. But as he was a guest he was treated to a large handicap.

Following the round of golf, the nineteenth hole was successfully played and all but six departed. They stayed as guests of Mr. Tilden for a delightful dinner and evening.

Toronto Paper Trade Shows Steady Improvement

Outlook for Autumn Business Very Bright—Work on News Print Mill of Great Lakes Paper Co. to Start at Once—Spanish River Pulp & Paper Mills, Ltd., Presents Favorable Annual Statement—Leaside Engineering Co. Withdraws $550,000 Suit From Courts

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, August 31, 1925.—Business in the paper line picked up somewhat during the last few days of the month. The first two weeks in August were dull but orders, which came in toward the close of the month, helped to round out a satisfactory volume of business, all things being considered. The book and writing manufacturers complain that trade fell off some but in other lines there is good feeling. The rag and waste paper stock market is improving and the board mills have made some rather heavy requisitions from dealers. The prolonged period of low prices and the protracted spell of dry weather have disorganized collections. Increased demand finds the dealers rather short of stock in waste paper.

The call for other lines of paper and rag stock is normal and the outlook for fall business good. Prices remain unchanged. There is a steady market for kraft pulp which is selling at $67.50, while kraft paper is also enjoying a fair sale and quotations remain at seven cents in car lots for machine finish and fifteen cents higher per cwt. for glazed.

The printing trade has been picking up and, those establishments which are foresighted, have, during the warm weather, been figuring out roughly their requirements for fall and will soon be placing their orders. They know by experience that as soon as the mercury goes down, the printing business brisks up and are getting ready to handle all that comes their way.

New Offices of Spruce Falls Co.

The head offices of the Spruce Falls Company, whose sulphite pulp plant is located at Kapuskasing, Ontario, have been moved to the twelfth floor of the Northern Ontario building at the corner of Bay and Adelaide street West, Toronto. Victor Kinsman, of Toronto, has been appointed purchasing agent for the company and has entered upon his new duties. J. H. Black, president of the company, spent the past week at the mill at Kapuskasing. It is reported that the name of the organization may be changed in the near future to the Kimberly-Clark Company of Canada, the Spruce Falls Company being a part of the Kimberly-Clark Company of Neenah, Wis.

Activity at Head of Lakes

One news print machine of the Fort Williams Paper Company, at Fort William, where a paper makers' strike was in progress for several weeks, resumed operations recently and the second machine will be put in commission at once. It is also reported in local circles that the work of building a 225 ton news print mill by the Great Lakes Paper Company at Fort William will be proceeded with at once and the estimated expenditure is $2,500,000. The Great Lakes Company have been operating a ground wood pulp plant of 170 tons capacity for the past year.

Spanish River Co. Has Good Year

There is a reflection in the lower news print prices which prevailed throughout the year, in the annual statement of the Spanish River Pulp & Paper Mills, Ltd., which has just been sent out to the shareholders. The company operates plants at Espanola, Sturgeon Falls and Spanish River, having an output of 700 tons daily of news print, and being the largest organization of its kind in Canada.

Gross profits show a substantial reduction, standing at $3,851,645, as compared with $5,083,029 for the previous year, representing a decrease of $1,231,384, but net profits showed a decrease of only $834,089, the total being $2,284,571, compared with $3,119,660. After the usual dividends at the rate of 7 per cent on the preferred and common stock and the proportion of dividends amounting to $140,517, paid to bondholders, $220,563 was transferred to reserves, additional to the $550,515 appropriated to reserves for depreciation, the surplus for the year amounted to $658,836, and the total surplus carried forward was $6,458,324, compared with $5,799,487 the year before. Earnings on common work out at $17.8 per share, as compared with $33 last year.

Strong Condition Revealed

Turning to the balance sheet, a strong condition is revealed, notably in the company's liquid position. An increase in net working capital was shown of $414,678, the total standing at $9,427,672. Current assets were reduced during the year by $370,248, to $11,903,160, but, on the other hand, current liabilities were lowered by $784,926, to $2,475,488.

A reduction occurred in inventories of $402,295, while accounts receivable decreased $277,573, companies' securities purchased and held increased $120,017, and cash increased $109,604. On the liabilities side, accounts and bills payable were reduced $772,829.

Property Account Increases

The total assets of the company stood at $44,682,123, a decrease of $22,526, as compared with the year before. The bonded indebtedness of the company was reduced by $576,386, to a total of $10,920,140, while property account showed an increase of $233,898. Reserves were increased by $679,950.

Toronto Company Drops Damage Suit

The suit to recover $550,000, entered by the Leaside Engineering Company, of Toronto, against the Bayless Pulp & Paper Company, and the First National Bank of Binghamton, N. Y., has been withdrawn from the Quebec courts, notice of discontinuance having been filed recently. This action was taken while the major suit to recover $1,750,000 was in progress, arising out of the alleged non-delivery of shares by the Bayless Company to the Leaside Company, these shares, according to the plaintiff company, having been sold to them.

The withdrawal of the damage suit is regarded as an indication that the Leaside Enlgineering Company will not appeal the judgment rendered a few days ago by Mr. Justice Stein at Quebec, in which the latter action was dismissed.

Less Pulpwood and Bush Operations

George B. Nicholson, of Austin & Nicholson, lumbermen and pulpwood dealers, of Chapleau, Ont., in accepting the Conservative nomination for the Federal constituency of Nipissing, said that during the coming winter the lumber and pulpwood camps of Northern Ontario and Northern Quebec would employ only about one-third of the number of men usually employed. In his own operations he could engage only about 600, whereas in normal times he employed 1,800. This reduction of two-thirds in the employment of woodsmen has a direct bearing on the prosperity of the farmer. Instead of buying 150 carloads of hay, as in ordinary years, he would require only 50 carloads. Instead of buying 45 carloads of oats, he would require only 15 carloads. He was obliged to reduce his operating staff and to curtail his purchases because he could not sell the produce of the woods on the old

Announcing a New Method of Producing Bleach Liquors

WHEN our technical staff first attacked the problem of absorbing Liquid Chlorine to produce bleach liquors, there was available only the old-fashioned tower system. We first suggested the desirability of using the refrigerative effect caused by the vaporization of the Liquid Chlorine by means of our evaporating coil now in successful use in more than a score of paper mills and several large textile mills.

The development announced herewith has been brought about by our realization of the need for a method allowing more rapid absorption and more flexible utilization of existing bleach house equipment. The accompanying cut shows the construction of the chlorine absorber and its location in the chlorinating system. This new equipment possesses the following advantages:

Simplicity in contruction and operation are secured by the fact that the vaporization of the Liquid Chlorine and its subsequent absorption by the milk of lime solution is entirely effected within the chlorine absorber. In connection with the unit batch system with the ton container as the base for the desired batch, it furnishes foolproof operation with any grade of operating labor.

Refrigerative Effect of vaporization is utilized even to better advantage than with the coil, since it is localized just where the heat of reaction of the combination of the chlorine and the lime is momentarily concentrated.

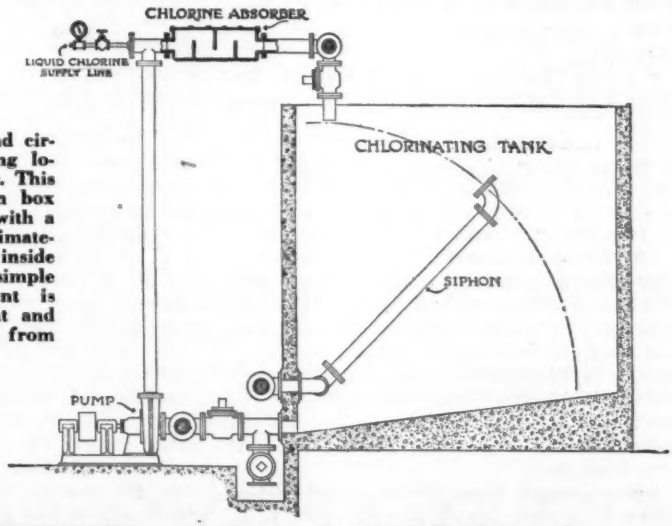
Rapidity of Absorption is such that chlorination can proceed at the rate of 2,000 pounds of chlorine per hour or better, depending on the capacity of the circulating pump. The advantage of this speed for large operations is evident.

Flexibility is a prime feature of this method, in that a single "chlorine absorber" can be used to successively chlorinate any number of tanks.

Accurate Control of the liquor, when the unit batch system is not used, is assured by the fact that liquor is available for testing at the exact point of chlorination.

Developments such as this, in the manufacture, transportation and use of this highly technical product, accrue primarily to the benefit of our customers. Because consumers appreciate this fact, the Mathieson Company is today the largest shipper of Liquid Chlorine in the United States.

You are cordially invited to visit us at the Tenth Chemical Industries Exposition, Grand Central Palace, New York, Sept. 28th to Oct. 3rd, 1925. Our exhibit will be located in Booths 326—327—330—331.



Chlorinating tank and circulating system, showing location of new absorber. This consists of a cast iron box about 2 ft. in length, with a cross-section of approximately 10" x 10," equipped inside with a series of simple baffles. This equipment is made at our own plant and may be obtained direct from us.

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250 PARK AVE. NEW YORK CITY

PHILADELPHIA CHICAGO PROVIDENCE CHARLOTTE

scale. The reason for this was that the industries to which he formerly sold have reduced operations or are standing still.

Notes and Jottings of the Industry

E. M. Irwin, of the Fred W. Halls Paper Company's sales staff, is spending his holidays at Algonquin Park.

R. K. Baker, of the District of Columbia Paper Company, of Washington, D. C., was in Toronto last week calling upon the trade.

J. Hewitt, Jr., President of Paper Sales, Ltd., Toronto, spent a few days last week at Kenogami, Quebec, and other points in the East.

Jesse Moore, of the Toronto sales staff of United Paper Mills, has been spending his holidays at Cobourg, while Leo Smith of the same staff is enjoying a vacation at the Kawartha Lakes.

The Don Valley Paper Mills Company have sent out to the trade a booklet of their ripple finish cover papers, which they are putting on the market. The new covers come in white and eleven assorted colors.

J. G. Gibson and T. H. Watson were in Montreal last week, attending a meeting of the directors of the Fort William Paper Company.

I. H. Weldon, president of the Provincial Paper Mills, has returned from an extended trip up the Nipissing river.

V. T. Bartram, of Toronto, is one of the directors of the Bartram Paper Products, Ltd., which has been granted a federal charter, with head office in Vaucouver, B. C., to carry on the business of dealers in paper, cardboard, pulp, etc.

White & Plaunt, Limited, Sarnia, Ont., have been granted a charter to buy, sell and deal in timber, pulpwood and other forest products. The authorized capital is $40,000, and among the incorporators of the company are William B. Plaunt, Arthur J. Manley and W. O. White.

Among the recently incorporated concerns is the Canadian Wholesale News Dealers' Association, Toronto, with a capital stock of $40,000, to deal in periodicals and other printed matter.

George W. Pauline, president of Ritchie & Ramsay, coated paper manufacturers, Toronto, has returned from a visit to his father, George Pauline, Manchester, Eng., who is well known to the Canadian paper trade through his frequent visits to Canada, when he represented Robert Fletcher & Company, of Stoneclough, Eng. Mr. Pauline reports that business in the paper line in the old country is rather dull due to cheap and heavy importations from Germany and other countries.

George Stokes, of the sales staff of the United Paper Mills, Toronto, who was ill for some time with tonsilitis, is able to resume his duties.

Peshtigo Paper Co. Opens Chicago Office

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., September 1, 1925.—The Peshtigo Paper Company of Peshtigo, Wis., will open a general office in Chicago in the near future. The Chicago headquarters will be in charge of R. G. Swan, assistant general manager of the company, and Miss Ruth Neumann, for a long time an employee of the concern, has gone to Chicago to assist in the organization of the new office. Mr. and Mrs. Swan will make their home in Chicago.

The paper company is in the process of reorganization. A meeting of stockholders was held in Hotel Northland, Green Bay, last week, in response to the call of President Charles A. Goodman. At the request of numerous holders of debenture bonds, a committee was appointed to represent them.

The committee includes John I. Beggs, Morris F. Fox, Robert E. Friend and Alvin P. Kletsch, all of Milwaukee, Frank L. Lauerman, Marinette, A. P. Woodson, Wausau, and Herbert E. Wuesthoff of the Quarles Company, Milwaukee.

John D. Bird, president of the American National Bank of Milwaukee, is actively conducting the affairs of the company as receiver, and has just completed an inspection trip to Peshtigo.

E. J. Harpe Declines to Run for President

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., August 29, 1925.—Edward J. Harpe, of Rumford, Me., has declined to become a candidate for the office of president of the International Brotherhood of Papermakers. The declination of Mr. Harpe was entirely unexpected and his action leaves the Carey, or insurgent ticket, without a head, and with little likelihood of electing any of its candidates nominated for other offices. The contest for the presidency of the Brotherhood has now narrowed down to M. H. Parker, present head of the union, who is seeking re-election; Frank P. Barry, of Ballston Spa, now vice president, and W. R. Smith, of Kalamazoo, Mich. The main fight will be between Mr. Parker and Mr. Barry and it is possible that the Carey faction will shift its support to the latter. W. R. Smith, of Kalamazoo, who was nominated for both president and secretary, has declined the nomination for secretary and stated that he will make the run for president.

Mr. Harpe's letter of declination received at union headquarters here, stated, among other things, that he had never desired to be a candidate for the office of president. Mr. Harpe until this week was employed as a machine tender in the mill of the Oxford Paper Company in Rumford, Me.

Adelbert Gardner, of Millinocket, Me., a candidate on the Carey ticket for the office of vice president in the American section, has also declined to become a candidate as has also Oswald Kelley, of Sault Ste. Marie, insurgent nominee for vice president in the Canadian section. The Carey or insurgent ticket now stands riddled through declinations on the part of those who had been named in the hope of putting up a stubborn fight against the present officials, all of whom are seeking re-election.

No word has yet reached headquarters in this city from Frank P. Barry, of Ballston, as to whether he will remain in the race for president or step aside in the interests of his superior, M. H. Parker. It is said, however, from unofficial sources that Mr. Barry has decided to remain in the race and oppose Messrs. Parker and Smith.

To Build Power Plant at Rapid Croche

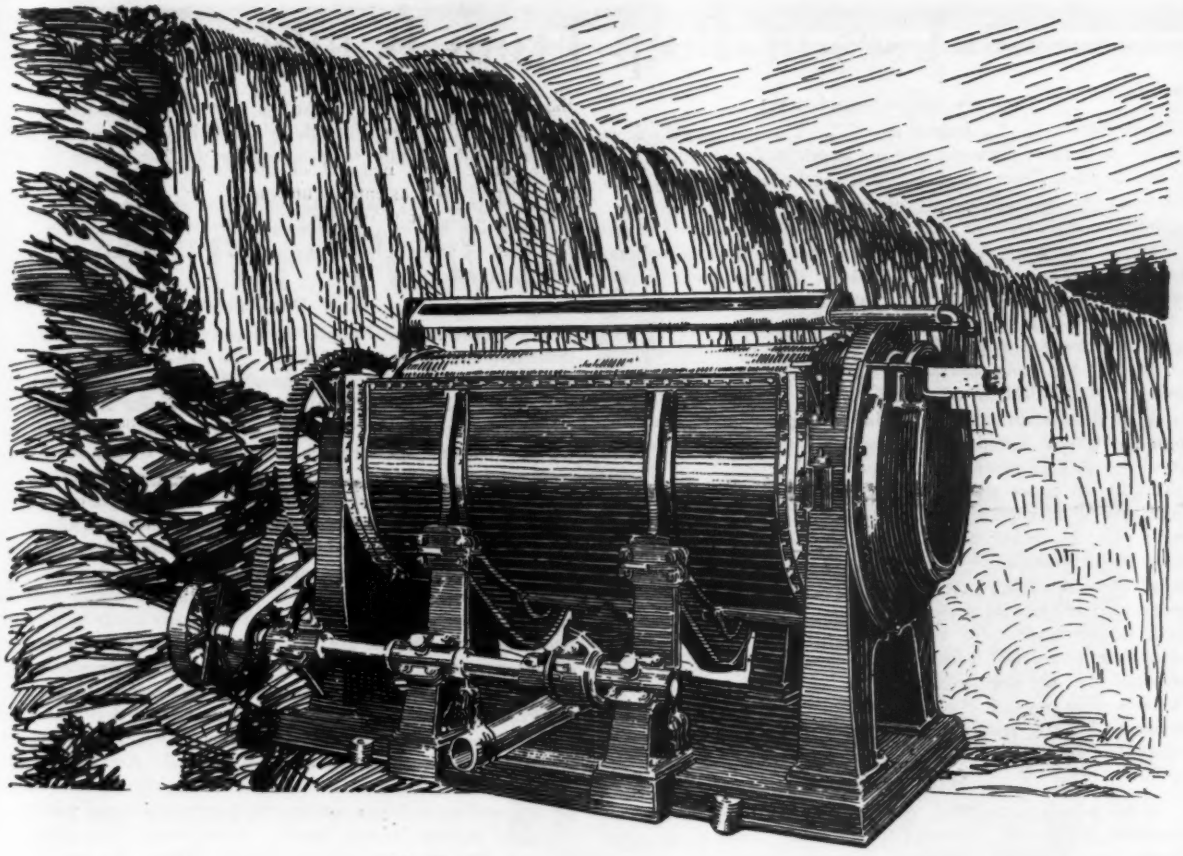
[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., September 1, 1925.—A permit has been granted by the United States war department to the Green Bay and Mississippi Canal Company, of Appleton, to build a power plant at Rapid Croche, a dam on the Fox River, five miles northeast of Kaukauna. The project will furnish added as well as more stable power for the papermaking industry of that section of the Fox River Valley.

Application for the permit had been made as early as last February, but action was delayed for several months as the specifications had to be sent to Cleveland, Ohio, to be passed on by government engineers, and from there were sent to Washington, D. C., for the final approval of the war department. Due to the fact that Secretary Weeks was ill at the time and that he was contemplating resigning from the cabinet, final decision on the permit was not made until this month.

The Green Bay and Mississippi Canal Company is ready to let contracts for the construction of the new power house, and construction will be rushed so that operation may begin the early part of next year. The project will cost in the neighborhood of a half million dollars. The building will be of steel frame work covered with masonry. Each of the four huge water wheels in the new plant will generate 1,000 horsepower, and these wheels will be connected with four generators which will produce approximately 3,000 kilowatts. The rapids at this point of the Fox River have a head of about 8½ feet.

After the proposed plant is built and made ready for operation, it will be turned over to the city of Kaukauna, Wis., for operation and maintenance on a long term lease.



Screening a Niagara of Paper Stock

Picture a paper screen 2½ miles long, a mile wide and a mile high, with a screening area of 65,000 square feet. It would take a screen of these gigantic proportions to handle the 17,000 tons of paper that pass through Bird Screens every day.

The Bird Screen has had no small share in helping the country's paper mills to feed the hungry presses and to pack and protect the nation's goods. It is considered a vital part of the equipment of most up-to-date mills. It makes possible continuous production of uniform quality paper.

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Canadian Builders of Bird Machinery
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BIRD SCREENS

8438.

Uses of Pulp From Bamboo

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 26, 1925.—The use of pulp from bamboo in India is discussed at some length in a trade supplement of the *London Times* which has just reached here. The *Times* discussing this and the India trade says:

The substantial trade of this country with India in paper manufactures will be affected if Government takes action on the recommendations made by the Tariff Board for the application of protection to the Indian industry.

In the last fiiscal year India imported nearly 1,750,000cwt. of paper and pasteboard, the shipments from this country including 106,000cwt. of printing paper, some 85,000cwt. of writing paper and envelopes, and 15,000cwt. of packing paper. The monthly returns do not show what proportion of other branches of the trade came from the United Kingdom. Germany, Norway and Sweden are large exporters of paper to the Indian market.

The Indian paper and paper pulp industries submitted to the Tariff Board an application for raising the existing 15 per cent. import duty to 25 per cent.; but the claim was modified in the course of the examination of witnesses. The Board holds that even the grant of the full protection asked for would not help the industry to compete with certain branches of import, such as news print, old newspapers (of which more than 500,000cwt. were received last year), and paper manufactures, such as pasteboard, millboard, &c., the shipments of which last year were 216,000cwt. The import trade which competes with Indian paper is estimated to amount to 30,000 tons a year, and consists mainly of printing paper (other than news print), writing paper and envelopes.

Scope of Duty

As this portion of the trade, held to be dependent for survival on protection, the Board recommends that the existing 15 per cent. *ad valorem* duty should be changed to a specific duty of one anna per pound on all sorts of writing paper and printing paper (other than news print) containing 65 per cent. or more of mechanical pulp.

The Board refuses a protective duty on the descriptions turned out by mills using grass, on the ground that this branch of the industry does not come within the conditions prescribed by the Fiscal Commission. One of the conditions is that in course of time the industry should be able to do without protection. The Board holds that these mills will never be in a position to face world competition without a protective wall, except in one area in Northern India, and that their disappearance would not ultimately endanger any important national interest.

The Board considers that bamboo pulp holds immense possibilities for the production of cheap paper in India. It is now some years since excellent paper was made in India from such pulp; but business men, even before the war, were reluctant to develop the concessions they had obtained. Sir Thomas Holland's Industrial Commission, reporting in 1918, attributed this hesitation to the lack of adequate information regarding the cost of transport of the raw material and doubt as to the capital outlay necessary on plant and machinery, coupled with uncertainty as to the cost and quantity of the chemicals required in the manufacturing processes. Finally, there was a fear lest the infant undertaking might be crushed by the dumping of wood pulp from Scandinavia or North America, and there was the knowledge that Japanese experiments had not proved successful.

The Tariff Board recommends the Government to explore the possibilities by advancing Rs. 10 lakhs to each of the companies engaged in experiments, one at Nahiti and the other in the Carnatic; or, alternatively, by guaranteeing a debenture and waiving any claim for interest for two years, with a view to testing the possibility of manufacturing paper from bamboo on a much larger scale than hitherto and trying to use the soda process for its manufacture. The total Government liability should be limited to Rs.20 lakhs, which would be fully compensated by the increase in Custom's revenue.

The proposal may lead, in the opinion of the Board, to India not only meeting her own requirements but also providing substantial quantities of paper pulp for export if world prices of paper remain at the present level.

Slow Development

The admission that bamboo development will be slow does not invalidate the argument that every effort should be made to turn the vast forests of India to account in the production of a commodity for which there is a large and increasing home demand. Investigations and experiments go to show that the bamboo, with proper treatment, can produce paper equal in quality to that derived from wood pulp.

It has been found that the bamboo used should conform to certain conditions. It should contain strong, yet soft and flexible fibres of regular length; it should be free from intercellular constituents, such as resins, gums, tannings, and the like; and the fibres should be white and should hold a fairly large element of available cellulose. The difficulty arising from the many knots in the bamboo is being met by the use of a slasher, with a series of properly distanced saws of the circular type which cut the bamboo at the knotted sections, the clean pieces being then subjected to either the sulphite or soda process. It has been claimed that even if the knots were not removed the soda process would be sufficiently strong to dissolve all the non-cellulose material. Another objection raised against the use of the bamboo is that the silicious coating on the surface militates against the recovery of the soda from the spent liquors. It has, however, been proved from recent experiment that provided sufficient time is allowed for the completion of the reaction the silicate does not interfere with the process of causticization.

Boston Trade "Sits Tight"

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., August 30, 1925.—The Boston trade continues to "sit tight." Some branches of the trade report that the last two weeks have been the quietest this year.

That a legitimate increase in all branches is due this coming month is readily admitted in all quarters. There are houses that report actual orders in hand—orders for fall and winter stock and in some cases queries on holiday goods. This business chiefly is in the fine grades division.

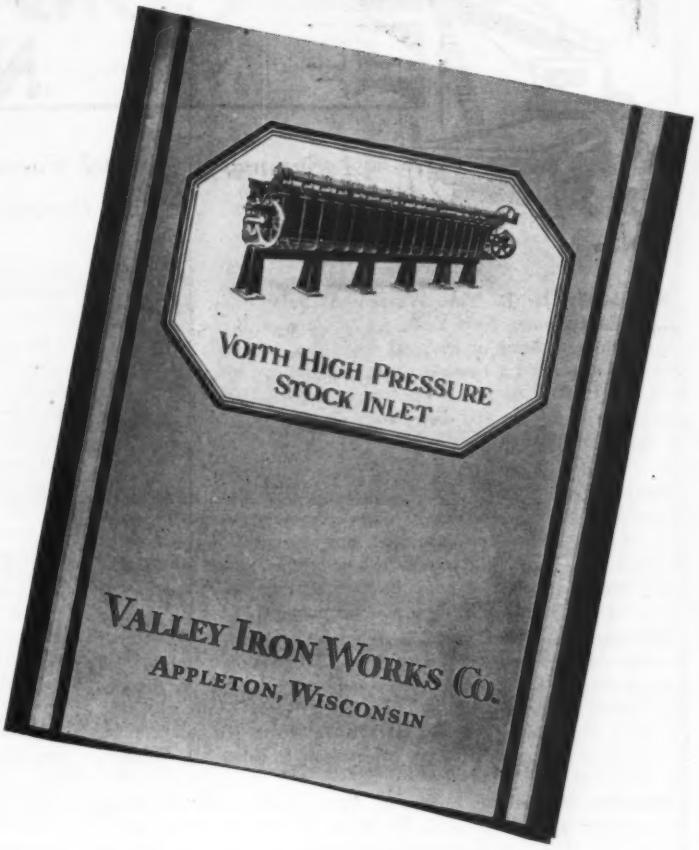
The rag and stock men are looking for increased business beginning early in September. The mills have not accumulated stocks, even at the low prices, whereas the demand has been fairly constant so, it is explained, these mills must soon be operating on a larger scale, coming into the market for stock. Old news and mixed papers are off, reflecting the cessation of buying which occurred recently.

The paper box trade is marking time, and most of these operators are looking for slow recovery but certainly not until late in the fall. A strong market is noted in kraft and other coarse papers and the same is true with tissues and gummed papers.

This week's survey shows, contrary to recent reports, that the retail stores have had a fairly good summer. This is borne out by the Federal Reserve report which stated that July and August retail trade is ahead of 1924 business.

This week showed no price changes. Executives, now returning from vacations, say that all indications point to a trade revival within the next few weeks.

Write for This Booklet



More than Advertising

Our answer to your Inquiry

A copy of this illustrated booklet is yours on request. Write for it today. It tells how to make better paper at a lower cost and describes in detail the new Voith High Pressure Stock Inlet, a new piece of equipment that puts precision into the art of paper making. With this machine it is possible to make a sheet of paper of uniform caliper and of much better formation than you ever before produced. Lumps and foam spots are eliminated. This improved product can be produced at a lower cost.

The booklet contains proofs of these statements. Do not fail to get your copy. A letter will bring it to you.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Ave.

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Riegelsville, N. J.—The Warren Manufacturing Company, 342 Madison avenue, New York, will proceed with the erection of a three-story addition at its local mill, 70 x 130 feet. The company will also build a two-story addition at its works at Warren's Mills, N. J., 70 x 80 feet. The last noted structure will be used primarily for storage and distributing service. A general contract for the buildings has been awarded to the H. K. Ferguson Company, Euclid Avenue, Cleveland, Ohio.

Salem, Ore.—The Western Paper Converting Company is taking bids for the erection of a new one-story plant, 100 x 240 feet, on local site, recently acquired, and expects to begin work at an early date. The mill is reported to cost in excess of $80,000. The company is affiliated with the Oregon Pulp and Paper Company, Salem. E. A. O'Neill is general manager.

Chicago, Ill.—The Transo Envelope Company, 3512 North Kimball avenue, manufacturer of "window" envelopes and kindred paper goods, has awarded a general contract to the O. W. Rosenthal-Cornell Company, Chicago, for the erection of its proposed one-story plant, 65 x 240 feet, at 3512-42 North Kimball avenue, to cost approximately $55,000. Michaelson & Rognstad, Chicago, are architects.

Menasha, Wis.—The J. Strang Paper Company, Menasha, has awarded a contract to C. R. Meyer & Sons, 50 Otter street, Green Bay, Wis., for extensions and improvements in its mill on Commercial street, estimated to cost $25,000. Work will proceed at once.

Whippany, N. J.—Fire, August 26, destroyed a portion of the mill of the United Paper Board Company, with loss reported at $30,000, including equipment and stock. It is planned to rebuild.

San Francisco, Cal.—The Independent Paper Stock Company, 650 Seventh street, has awarded a general contract to Chapin & Company, 525 Sixth street, for a two-story and basement building on North Townsend street, near West Sixth street. It will be used primarily for storage and distributing service.

Chester, Pa.—Garrett & Sons, have acquired the former Dutton mill property at Knowlton, near Chester, heretofore devoted to flour-milling service, and will remodel and equip the structure for a new paper mill. A list of machinery to be installed will be arranged at an early date.

Toronto, Ohio—The plant and property of the Toronto Paper Mill Corporation has been acquired at a sheriff's sale by George E. Wisener, general manager of the plant of the Carnegie Steel Company, Mingo, Ohio, and associates, for a consideration of $120,000. The new owners are reported to be planning to operate the property.

Buffalo, N. Y.—The Power Corporation of New York, recently organized by a merger of local utilities, has negotiations under way for the purchase of the surplus electric power from the hydro-electric generating stations of the International Paper Company in Northern New York and New England. It is proposed to construct transmission lines and distributing systems to utilize the power for commercial service. The Power Corporation is controlled by the St. Regis Paper Company, Watertown, N. Y., with a number of mills in this district.

Brooklyn, N. Y.—The Universal Folding Box Company has renewed its lease for space in the Bush Terminal, South Brooklyn, using a total of 12,400 square feet in Building No. 19, for a three-year term, and 5,886 square feet in the structure under a five-months' renewal.

Corner Brook, N. F.—The Newfoundland Power and Paper Company has started operations at its local mill for the production of news print, now being completed. The plant has a rating of 400 tons of material per day, and will be developed to maximum schedule at an early date.

New Companies

New York, N. Y.—The Hollywood Paper Company has been incorporated with a capital of $25,000, to manufacture and deal in paper products. The incorporators are P. A. Kruger, A. E. and J. S. Klinck. The company is represented by Alexander Rosenbaum, 233 Broadway, New York.

Milford, Conn.—The New England Corrugated Box Company has been incorporated with a capital of $50,000, to manufacture corrugated paper boxes and containers. The incorporators are M. L. Soden and R. H. Soden, both of New Haven, Conn.

Brooklyn, N. Y.—The K. & M. Paper Box Corporation has been incorporated with a capital of $10,000, to manufacture paper boxes and containers. The incorporators are N. and M. Mishkin, and A. Kostroff. The company is represented by N. Nadel, 277 Broadway, New York, attorney.

St. Louis, Mo.—E. G. Mernagh & Co., Inc., has been incorporated under state laws to manufacture and deal in paper specialties and other stationery products. E. G. Mernagh, 4946 Northland avenue, is the principal incorporator.

New York, N. Y.—The Moore Paper Products Company has been incorporated with a capital of $20,000, to manufacture and deal in paper specialties. The incorporators are S. S., M. A. and E. S. Moore. The company is represented by S. Moore, 476 Seneca street, Brooklyn.

Shortsville, N. Y.—The E. M. Hall Paper Company has been incorporated with a capital of 500 shares of stock, no par value, to operate a paper mill in this vicinity. The incorporators are E. M. Hall, D. B. Brown, and H. D. Aldrich. The company is represented by L. G. Hoskins, Geneva, N. Y.

New York, N. Y.—The General Fibre Corporation, care of the United States Corporation Company, 65 Cedar street, New York, representative, has been incorporated under Delaware laws with capital of $510,000, to manufacture fiber products.

New York, N. Y.—The Nonspil Paper Cup Corporation has been incorporated with a capital of 4,000 shares of stock, no par value, to manufacture paper cups and other containers. The incorporators are C. A. True, A. G. Thorne and B. Lee. The company is represented by Koenig, Sittenfield & Aranow, 27 Cedar street, New York, attorneys.

"La Portena"
Paper Mill
Dock Sud
Avellaneda
ARGENTINE

IN ARGENTINE

And in Brazil Dilts Beating Engines are used. In South America as well as here in the north, they realize that "paper is made in the beaters" and they seek good equipment to accomplish good results.

They raise tremendous herds of fine cattle down in Argentine besides using Dilts Beating Engines in their paper mills.

The Dilts approved NEW TYPE Beating Engines are the latest and best of our line. They embody all the good features of a good beating engine without any of the faults often found in Hollander beaters.

They are fast circulating, handle very thick stock, beat uniformly, mix rapidly, dump quickly and all this **without any increase in power consumption.**

You will be interested in the Dilts approved NEW TYPE Beating Engines for your mill. Send for address of users, names of recent purchasers and list of our unshipped orders.

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

New York Trade Jottings

J. L. Fearing, sales manager of the International Paper Company, has been elected vice-president of that company to succeed Chester W. Lyman, resigned.

* * *

The J. J. McCabe Lathe & Machinery Corp., Singer Bldg., New York, has installed another one of its "2-in-1" Double Spindle Lathes in the Norfolk, N. Y., plant of the St. Regis Paper Company.

* * *

J. V. N. Dorr, president of the Dorr Company, engineers, arrived home on August 26 on the Olympic, after spending two and a half months in Europe in connection with the company's European business.

* * *

Charles W. Kaseler who has been with the New York and Pennsylvania Company for twenty-nine and one-half years is now connected with Charles F. Hubbs & Co., paper dealers of 383-389 Lafayette street.

* * *

John F. Sarle Company, Inc., paper dealers, are inviting their frinds to visit the new Searle Building, 50 Hudson street, on Wednesday and Thursday, September 9 and 10, between the hours of 12 o'clock noon and 2 p. m.

* * *

The International Paper Company has declared the regular quarterly dividend of 1¾ and 1½ per cent on the 7 and 6 per cent preferred stock, respectively. Both dividends are payable October 15 to stockholders of record October 1.

* * *

The Universal Folding Box Company has signed a three years renewal of lease on 12,417 ssuare feet on the third floor in Building No. 19 of the Bush Terminal Company, South Brooklyn, and a five months' renewal on 5,886 square feet on the second floor of the same building.

* * *

Following the recent announcement of the change of ownership of the Schlichter Jute Cordage Company, comes the announcement that the House of John W. Banker, 17-19 White street, has been named as the company's representative for the distribution of their twines in the Greater New York territory.

* * *

Due to its expansion in its cotton rags division, the Stone Brothers Company has removed its offices to more commodious quarters at 342 Madison avenue. E. A. Stone who is now concluding an extensive tour through Europe is expected to arrive home in New York City about September 15, making the home trip on the Olympic.

Return From Corner Brook Mill Opening

The New York men who were present last week at the formal opening of the new Corner Brook Mill of the Newfoundland Power and Paper Company, Ltd., have returned home, enthusiastic over the manner in which they were entertained. There were 42 in the party which sailed from Montreal on the steamer Nayarit of the Clarke Steamship line for scene of the opening. The official dinner was attended by about 800. The toastmaster was Sir Glynn H. West and the chief speaker was Sir William Allardyce, Governor of the Island. Several of the guests responded to toasts.

On August 25 a dinner was given to about 40 guests by Desmond A. Clarke, president of the Clarke steamship line. The program of dedication etc. was followed as published in THE PAPER TRADE JOURNAL recently. Each person who attended the official opening was given as souvenirs of the occasion a booklet containing a complete list with description of all the mill equipment and a sample of the paper manufactured at the mill.

The boat which brought the party away from Corner Brook also carried the first considerable consignment of paper from the new mill. It was consigned to the *Jacksonville Times-Union* of Jacksonville, Florida.

Central Ohio Paper Co. Issues "Copco News"

From The Central Ohio Paper Company of Columbus, Ohio, a bimonthly newspaper, "Copco News", is now being mailed to the company's printer-customers in the eight states of its territory.

Illustrations of the home office at Columbus, the largest building anywhere in the world devoted exclusively to the wholesale paper business; and of the Toledo and Cleveland houses, which are almost as large as the home office, appear in the masthead of "Copco News." There also are printed the addresses of seven other branch offices of The Central Ohio Paper Company.

Different paper stock is to be used for each issue, reports the advertising department of the company under whose direction the paper is edited. The current issue, which is No. 2., Vol. 1, is on Euclid Dull White Enamel. Fine-fold enamel was the basis of No. 1., Vol. 1.

News about printing, methods of simplification, cost reduction, etc., and lists of additions to stock, lines discontinued, and price changes are regular features of each issue.

J. Rogers Rebuilding Church for Ausable Forks

AUSABLE FORKS, N. Y., August 29, 1925.—James Rogers, of the J. & J. Rogers Company, is taking an important part in the rebuilding of this village which was almost completely wiped out by the disastrous fire of May 14. Mr. Rogers, whose firm is the principal industry of the village, is constructing, at his own expense, a new edifice for St. James Episcopal Church, of which only the stone walls remained standing after the fire. Cost of restoring the structure will total $30,000. Mr. Rogers has employed Norman B. Sturgis, of Albany, as the architect and construction work is already under way. St. James Episcopal Church was originally built in 1876 by James Rogers' father, who was also the founder of the J. & J. Rogers Company.

High Valuation Placed on Fancy Papers

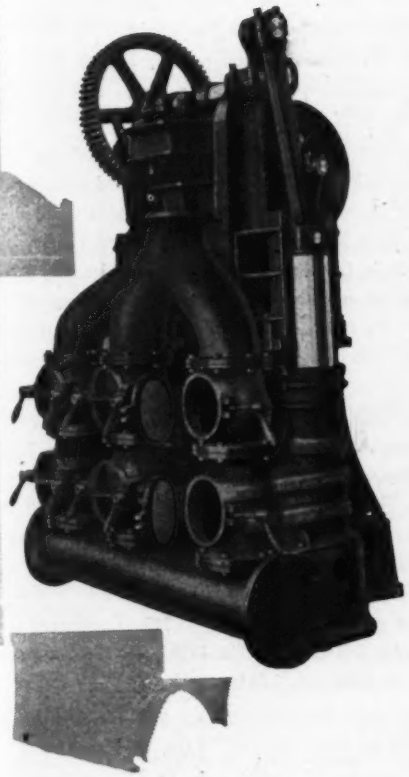
An important decision on the value of metal coated papers, involving several phases of the fancy paper industry has been rendered by the General Appraiser who passed on a recommended increase of valuation of foreign papers. After an investigation of half-fine, aluminum carton and gold carton papers, placed a higher valuation on all three papers, resulting in the assessment of a higher duty than that under which the paper was originally entered by the appraiser. The value of the half-fine paper was increased by 5 per cent and the cost of packing; as was also the aluminum carton paper. The gold carto npaper was not only given the added value of 5 per cent and packing cost, but in addition the higher quality was increased from $700 to $715 per 1,000 sheets.

No Paper Show Until 1927

The announcement that the third Paper Industries Exposition which was planned to be held the week of February 22, 1926, would be postponed will prove of interest to the paper trade in general. After mature thought it was decided to postpone the Exposition until the Spring of 1927 when the American Paper and Pulp Association will hold its fiftieth anniversary meeting.

Plans will be made which should result at that time in a really big convocation of organizations interested both in the manufacture, sale and use of paper. Work on this exposition will begin early and every effort will be made to stage at that time a paper show of unprecedented magnitude.

PROFITABLE PUMPS



"BELOIT" PUMPS, like judiciously invested money, pay big dividends. Uninterrupted service, such as "Beloit" Pumps produce, means savings in time, effort, production, monev. Unproductive hours are eliminated. Labor accomplishes more. Production is speeded up.

Forged steel crank shafts instead of cast steel. Locomotive type connecting rods take up wear on crank and wrist pins. Self-aligning features prevent undue strain on cranks or frames. Sturdiness and endurance is built into every pound of its depedable mechanism.

Hundreds of "Beloit" pumps in actual service to testify to these facts.

When you want a good, reliable pump, let "Beloit" figure with you.

Write for Pump Bulletin and get the facts

BELOIT PUMPS FOR SERVICE

Beloit Iron Works **Beloit, Wis., U. S. A.**

Since 1858 Builders of Paper Board Mill and Container Plant Machinery

PAPER TRADE JOURNAL
ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXI New York, September 3, 1925 No. 10

CENSUS SHOWS BIG PAPER INCREASE

The data on paper and wood pulp in the biennial census of manufacturers for 1923 just issued by the Department of Commerce visualizes in an interesting manner the impressive growth of the industry in recent years.

In the paper industry, as in most others, a substantial growth between 1914 and 1919 was followed by a decline from 1919 to 1921, and this in turn was followed by a recovery between 1921 and 1923. All the important classes of products show substantial increases in quantity for the recent two-year period, and substantial increases in value are recorded for all except news print, for which a slight decrease appears, and wood pulp, for which the increase is small.

The percentage of increase from 1921 to 1923 for the total of paper and paper board was 47.8 in quantity and 38.7 in value, for news print 22.9 in quantity and—3.0 in value for book paper 52.5 in quantity and 37.7 in value for fine paper 63.3 in quantity and 45.3 in value for wrapping paper 45.9 in quantity and 39.3 in value for paper board. 60.5 in quantity and 75.2 in value for tissue paper 34.9 in quantity and 31.2 in value and for building, roofing, asbestos and sheating paper 59.0 in quantity and 83.2 in value. The production of wood pulp increased 31.7 in quantity but showed practically no change in value.

The figures furnished monthly by the American Paper and Pulp Association and affiliated associations have, with the exception of only a few months, during the past two years since this census was taken, shown generous increases, indicating that the industry to date, as compared witth several years ago, has expanded even more greatly than may be seen from the foregoing percentages.

For the 1923 census the establishments engaged primarily in the manufacture of paper and wood pulp reported products valued at $907,346,992, as compared with $667,435,847 in 1921, $788,059,377 in 1919 and $332,147,175 in 1914. Of the 746 establishments engaged in the industry, 525 reported the manufacture of paper only, to the value of $467,584,925; 49, wool pulp only, $21,212,772; and 172, both paper and wool pulp, $418,549,295.

The total output of paper of all classes (including cardboard and other paper boards) in 1923, 8,029,482 tons was valued at $812,509,171, as compared with 5,431,265 tons, valued at $585,734,960, in 1921. The amounts and values of the principal classes of paper included in the total for 1923 were as follows: Paper boards (cardboard, strawboard, news board, etc.), 2,792,832 tons, valued at $182,867,070; book paper, 1,221,402 tons, valued at $171,135,954; wrapping paper, 1,026,979 tons, valued at $120,763,063; news paper (in rolls and sheets), 1,521,080 tons, valued at $110,864,736; fine paper, 377,029 tons valued at $89,098,027; tissue paper, 250,616 tons, valued at $44,144,313.

The production of wood pulp, including that consumed in the mills in which manufactured, increased from 2,876,301 tons in 1921 to 3,789,172 tons in 1923. The production of wood pulp for sale or for consumption in mills other than those in which manufactured increased from 867,740 tons, valued at $63,373,552, in 1921 to 1,063,398 tons, valued at $65,497,098, in 1923, the rates of increase in quantity and value being 22.5 per cent and 3.4 per cent respectively.

The output report for 1923 also included paper bags, paper boxes and other containers, and miscellaneous products, to the combined value of $29,340,723. (The production of paper bags and of paper boxes and other containers in this industry constitutes only a minor porportion of the total output of such products, most of which are made in establishments classified in other industries.)

Of the 764 establishments reporting for 1923, 153 were located in New York, 82 in Massachusetts, 62 in Pennsylvania, 57 in Wisconsin, 53 in Ohio, 42 in Michigan, 41 in Maine, 37 in Connecticut, 36 in New Jersey, 28 in Indiana, 25 in New Hampshire, 23 in Illinois, 17 in Vermont, 10 in Maryland, and the remaining 80 in 20 other states.

Steam turbines, internal combustion engines, water turbines and electric motors driven by purchased current were in 1923, 16,017, aggregating 2,178,623 horsepower; in 1919, 11,736, aggregating 1,849,699 horsepower and in 1914, 9,049, aggregating 1,611,954 horsepower. Electric motors totaled in 1923, 28,679, aggregating 984,645 horsepower; in 1919, 17,756, aggregating 583,586 horsepower, and in 1914, 8,210, aggregating 325,211 horsepower.

The coal consumed in 1923 was 10,509,575 short tons.

The total number of paper machines reported in 1923 was 1,828, capacity per year in short tons, 9,725,349 as compared in 1921 with 1,528, capacity 8,614,163 tons in 1919 with 1545, capacity 7,671,043 tons and in 1914 with 1,540, capacity 6,439,787 tons.

The number of fourdriniers in 1923 was 955 with a capacity per twenty-four hours in short tons of 17,488, as compared in 1921 with 891, with capacity of 16,072 tons, in 1919 with 862, with capacity of 14,542 tons in 1914 with 859 with capacity of 13,545 tons.

The number of cylinders in 1923 were 873 with capacity per twenty-four hours in short tons of 14,899, as compared in 1921 with 637 with capacity of 12,995 tons, in 1919 with 683 with capacity of 10,549 and in 1914 with 681 with capacity of 8,024 tons.

The number of grinders reported in 1923 was 1,378 with capacity per twenty-four in short tons of 7,988 as compared in 1921

with 1,371 with capacity of 7,514 tons, in 1919 with 1,380 with capacity of 7,022 and in 1914 with 1,497 with capacity of 6,611 tons.

The total number of digestors in 1923 was 702 of which 401 were sulphite, 200 soda and 101 sulphate, as compared in 1921 with 666 of which 395 were sulphite, 201 soda and 70 sulphate, as compared in 1919 with 739 of which 478 were sulphite, 202 soda, and 59 sulphate, as compared in 1914 with 581 of which 361 were sulphite, 197 soda and 23 sulphate.

The wood pulp capacity reported in 1923 in short tons per year was 4,957,975 of which 2,244,651 tons were ground wood, 1,778,429 tons were sulphite, 519,269 tons were soda and 415,628 tons were sulphate, as compared in 1921 with 4,627,040 tons of which 2,128,842 tons were ground wood, 1,732,464 tons were sulphite, 502,913 tons were soda and 262,821 tons were sulphate, as compared in 1919 with 4,348,582 tons of which 1,975,039 tons were ground wood, 1,656,066 tons were sulphite, 464,482 tons were soda and 252,995 tons were sulphate, as compared in 1914 with 3,708,130 tons, of which 1,789,363 tons were ground wood, 1,341,622 tons were sulphite, 499,325 tons were soda and 77,820 tons were sulphate.

In the 1923 census New York led in the production of news print, hanging, bogus or wood manila wrapping, wood pulp boards, toilet and manila and No. 2 white tissue; Massachusetts in machine finished and sized and super calendered book, cover, ledger, pole dried, machine dried, card board, bristol, card middles, ticket, etc., and high grade tissue; Michigan in coated book, chip board, and all varieties of board not specially enumerated; Wisconsin in air dried, heavy mill wrappers, Kraft, all varieties of wrapping paper not specially enumerated, towels and napkins, and white and colored waxing tissue; Ohio in sulphite bond; Maine in bag paper; Indiana in straw board; New Jersey in news board; Connecticut in binder trunk and press board and Pennsylvania in building, roofing, asbestos and sheathing papers and all other varieties of paper not specially enumerated.

Merging of Wisconsin Power Lines Continues

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., September 1, 1925.—The merging of power lines which has been taking place in Wisconsin for the last few years passed through another chapter about a week ago when the Insull interests of Chicago took over seven small companies in central Wisconsin. The sale involved over a half million dollars.

All lines now link with the Wisconsin Valley Electric Company of Wausau which recently purchased the power line at Waupaca. Practically all the Wausau company's sources originate from the waterpowers on the Wisconsin River, one of the great power streams of the state furnishing power to a number of paper mills. The line connects with 14 power plans some of which are owned by the paper mills.

Appleton Mills Exhibit at State Fair

APPLETON, Wis., August 29, 1925.—Appleton paper mills, their subsidiaries and paper converting concerns will have the largest portion of the Appleton section of the Wisconsin Products Exposition in connection with the Wisconsin state fair at Milwaukee the first week in September.

The Wisconsin Products Exposition was started as a separate enterprise by the Wisconsin Manufacturers Association. This year it will be held at the state fair in a specially constructed Manufacturers building. Practically the best section of the building, containing about 12 booths, is reserved for the Appleton industrial concerns. Paper mills are displaying various types of paper, and machine shops are exhibiting models of paper machines.

Plans for Disposing of Hydro-Electric Power

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, August 29, 1925.—Paper making circles in this section of Northern New York are much interested in the reported plans of the International Paper Company for disposing of its surplus hydro-electric power. Negotiations are now said to be under way between the I. P. Company and the Power Corporation of New York for hydro-electric properties in this section and New England. These negotiations are expected to result in the transfer, at an early date, of approximately 50,000 horse power, still undeveloped, to the Power Corporation. It is understood here that there will be no actual sale of the properties but the I. P. Company will contract to sell current to the Power Corporation. While no details of the deal under way are available recent extension of the Power Corporation makes necessary the creation of a reserve current supply and this, it is said, can be done advantageously to both corporations by the development of the hydro-electric sites at Glen Park owned by the I. P. Company.

It was decided some months ago that the properties at Glen Park, which constitute the Watertown division of the International Paper Company's manufacturing organization, would be disposed of as part of the company's program for more intensive development of its Canadian properties. At that time it was reported that the Glen Park properties, including mills and tenements, were about to be sold to the Power Corporation of New York but more recently the reports were that the properties were to be retained by the I. P. Company and merely leased to the Power Corporation. The potential horse power of the Glen Park site is not fully known here but is supposed to approximate 50,000 horse power.

The International Paper Company is in a position to sell a considerable part of its horse power, now produced, and the increase in this capacity which will result from the proposed regulation of the Hudson and Sacandaga rivers by the State of New York. At the present time the I. P. Company is selling much of the hydro-electric power generated at Sherman Island, South Glens Falls, Cadyville, and the Wilder Development to public utilities companies included in the Adirondack Light and Power Company.

Statement Expected Soon From Pres. Willson

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., August 31, 1925.—President Sidney L. Willson of the American Writing Paper Company told your correspondent today that he expected within a week or 10 days to be able to make a definite statement about the reorganization plans of the company.

"There has been one little matter that has held back the proceedings," he said, "but I expect that will be cleared up very soon and that there will be something definite to state in a very few days—possibly within a week or 10 days."

Mr. Willson also said that the legal steps to be taken to enable the company to sell its outside mills as already noted were necessarily slow, as legal matters are slow and in addition during July and August most things are sidetracked. He expected that the proper legal steps would be taken very shortly so that the properties could be advertised for sale within a week.

The paper business in this section is yet in the doldrums but the American Writing Paper Company is getting its share. The usual midsummer period of low water is now on and the use of surplus water from the canals was entirely cut off this week by the Holyoke Water Power Company. Should this method of curtailing supply prove insufficient the next step will be to close the head gates, a step that has not been taken this year as yet.

Mattagami Co. Installing Bleach Plant

SMOOTH ROCK FALLS, Ont., September 1, 1925.—The Mattagami Pulp and Paper Company is installing a 200-ton daily bleach plant for bleaching that amount of sulphite pulp, which si the capacity of the plant.

SYMBOL of QUALITY
KALBFLEISCH
CHEMICALS
FOR NEARLY A CENTURY

Chemicals for Paper Mills

English China Clay

Coating:
Filler

Best Grades
Uniform Quality
Frequent Deliveries

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200 FIFTH AVENUE NEW YORK, N. Y.
FACTORIES—Erie, Pa. Kalamazoo, Mich. Chattanooga, Tenn. Waterbury, Conn. Elizabeth, N. J. Brooklyn, N. Y.

A typical example of WORTHINGTON thoroughness

THE PUMP shown is a typical example of the thoroughness with which Worthington meets paper-mill pumping requirements.

It is used for the difficult task of pumping thick, unscreened stock from de-inking machines in the plant of the Falulah Paper Company, Fitchburg, Mass. An impeller of special design enables the pump to perform its service at a higher efficiency than obtainable with the usual fan-type construction.

Staunch construction and external ring-oiling bearings add much to its dependability and low maintenance cost.

Our long experience and extensive study of paper-mill requirements is at your disposal. May we co-operate in solving your problems?

Worthington paper-mill pumps include both centrifugal and reciprocating types, power and steam driven, for every purpose.

WORTHINGTON PUMP AND MACHINERY CORPORATION
115 BROADWAY, NEW YORK BRANCH OFFICES IN 24 CITIES

WORTHINGTON

4622-2

Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

Foundation For Sound Industrial Relations

By Ellwood Wilson *

The age-long struggle between capital and labor has bred a feeling of suspicion between the management of industrial concerns and the workmen, which is noticeable even in the most intelligent and enlightened executives and is shown by labor in its distrust of any proposal put forward by the management. That this attitude has more or less justification is seen in the demands of unions and in the fact that whenever times become dull, the cutting of wages is the first thing that is thought of. Instead of a rigid inspection of manufacturing processes for leaks or an appeal to the workman to cheapen production costs, or rigid economies along other lines, first of all, out comes the knife and down go the wages.

Must Be Absolutely Honest

There is only one way to rid our industries of this bugbear of suspicion and irritation and that is for both men and managements to be absolutely honest, not only in act, but in motive. There is no use in welfare work and other benefits for the men, if these are merely blinds to keep the men from thinking about their conditions of work or their wages. No man, be he president of a company or a common laborer, can or will do his best work if he feels that he is underpaid or unjustly treated. If his family haven't enough to eat or wear or he is behind in his rent, he will think about it whenever his thoughts are not concentrated on his work; and in these days of machine production a man has lots of time to think. In a discussion of the subject the other day, it was well-stated that in the old days when a man made all of an article with his own hands he had to think and he enjoyed the creative and self-expressing labor. Now, when all he has to do is to tend a machine, he does what every idle brain does,—falls into a reverie. If he has debts or troubles at home, or has been unjustly reprimanded by his foreman, his reverie takes the form of imagining what he would do to his foreman or the company that employs that foreman, if he could. Every time he has an unoccupied moment he is brooding over this, and eventually he develops a very mild form of insanity which is bad for him and worse for his productive capacity.

Give the Man the Same Way to Express Himself

The very best way to correct this state of affairs is to give the man some way to express himself and to create something. First of all make him feel that he is an integral part of the concern; that he is directly responsible for the success of the company, for the payment of dividends, for the sales, through the quality and quantity of the product. Try to show him how he can help control the cost of production. Let him understand thoroughly what he is doing and why it should be done that way. Set up a record, his own or someone else's, to beat. Get him interested in his garden, or some hobby, in civic affairs or in something that will occupy his thoughts. Let him see that the work he does and that done by his fellow laborers has a direct effect on his own wages. Not only does this need to be done for the wage-earners and skilled labor but also for the clerks in the office, for accountants and others who, while not as articulate as labor, still have the same troubles and the same heartaches.

Of course, all of these things require a lot of thought on the part of executives and much trouble and ingenuity; and one reason why more attention is not paid to them is that we have fallen into the rut of following old-fashioned customs and are also mentally lazy and satisfied to let well enough alone.

Mental Confidence the Watch Word

But it must be emphasized, for it is the kernel of the whole matter, that the spirit must be right: that any work done for employes must be done honestly and in a spirit of service and not with some ulterior motive of keeping labor satisfied, or keeping a higher class of labor, or of keeping down wages or salaries by giving other things. If the motive is sincerely one of true service all the other benefits will follow. Conversely, labor must do its utmost to serve the employer, giving a full day's work and every effort of hand and brain honestly, because it is the right thing to do and not just to get better wages or better treatment. This seems like preaching, but nothing has been proved more thoroughly practical. Nothing will make any organization successful except the right spirit behind it, to do to the customer, the stockholder and the laborer exactly what would would have them do to you and then some.

A Practical Demonstration

There is a practical demonstration of this right here in Canada in the career of the Laurentide Company, which, starting with the above text as an ideal, has carried it out with complete success. Everything possible has been done for the stockholders and the customers and the employees: real "Service" to them all. And the ideal has not stopped here, but has been extended to take in the community, the Province and the Nation. Dividends have been paid uninterruptedly; the quality of the products is second to none; and everything possible has been done to help the customer in giving him the product at a fair price and showing him how to use it. The employees have always had as high or higher

* Manager Forestry Division, Lawrence Co., Ltd., Grand Mere, Que.

wages than those paid elsewhere in the industry, and have had every opportunity for recreation, education and the maintenance of health. Through the taxes paid by the Company and its example and help, the schools are second to none in the Province for Catholics, and the Protestant employes have a splendid free school. There is a hospital, a dental clinic, a health service and insurance.

The town has been provided with a perfect water and sewer system; has been beautified in every way and has had an athletic field provided.

The Province has been helped by contribution to road building, by maps and by cooperation and practical assistance in building up its fire protection service and its forest service.

Contributions of land, buildings, and money have been made to the Federal Government for research work.

Cooperation with other members of the industry has been complete and generous.

A Recent Experiment

A recent experiment has shown the honesty of the spirit in which all of these things have been done. This was the formation of the Laurentide Council, conceived as a liaison body between the management and the employes, to deal with all complaints or suggestions on the part of the employees and to communicate to the men the policies and plans of the management. It is composed of eighteen members elected from each department by the employes and seven members chosen by the management. It has no authority to enforce its decisions on either party and can only make recommendations, but since its formation no recommendation to either side has been turned down. It meets once a month; all routine business is attended to and all complaints first heard by an executive committee of five, three employes and two management members. Some of its accomplishments are: Refusal by the men to join the Union; a vacation plan, by which every worker who has been with the Company for a certain period receives a vacation with full pay; a plan by which the employes can purchase stock of the Company on payment of instalment; and various adjustments of old grievances. The latest wage scale was discussed fully between the management and the Council and arranged to everyone's satisfaction.

An Interesting Point of Procedure

When first formed, many complaints were brought before it, but when it was found that all the facts were looked into, the man's record scrutinized and the foreman's, superintendent's and manager's side of the case fully heard and a decision rendered absolutely on the merits of the case, the complaints gradually ceased and are now rare. One interesting point of procedure may be noticed. No decision is ever rendered by the executive committee unless it is unanimous. If agreement cannot be reached at one meeting, another is held. If no decision could be reached, the case would be referred to the full Council, but this has never happened.

In the working of the Council it is interesting to note how quickly the spirit behind a complaint, either on the part of the management or the men comes out. If the grievance or complaint is well-founded, one senses it almost at once; on the contrary, if there is the least suspicion that there is any attempt to "put anything over," the decision goes against the complainant. The cards must be put on the table.

The high plane upon which all relations have been put is responsible for their success and is the realization of an ideal of the President of the Company.—From *The Journal*, Grand Mere, Que.

Paper Makers Get Advances in Italy

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 19, 1925.—Of late months there have been reports in Italy of some labor unrest in the paper industry and a number of strikes for higher wages have occurred in some of the largest plants which have been settled by advances.

Specifications for Waterproofed Caselining Paper

At the request of the transportation division, Bureau of Foreign and Domestic Commerce, tests of waterproof caselining papers used for overseas shipments were made and tentative specifications based on these tests submitted to that bureau. These were published in its manual of "Packing for Foreign Markets." As this work indicated that more satisfactory testing methods were required, this research was continued.

The main requirements of paper used for this purpose are waterproofness and strength. The type that has been found to give the most satisfactory service consists of two sheets of 30 pound No. 1 kraft paper cemented together with a layer of asphaltum, the finished paper having a weight of 90 pounds per 100 sheets, 24 by 36 inches in size. The test commonly employed for determining the water resistance was found to be inadequate and very misleading. This method consists in placing the samples under a water column and noting evidence of transuded moisture by observations of the under surface which is exposed to the air. Many papers, such as rosin sized kraft wrappings, which have comparatively slight water resistance, withstood this test indefinitely for the reason that water is transmitted through the sheet so slowly that it evaporates without forming drops or other visible evidence of its presence. A sensitive but positive method of detecting transuded moisture—the "ground glass" method—was evolved. This is described in an article "Testing waterproofed paper," published in Paper Trade Journal, September 4, 1924. When tested by this method rosin sized kraft wrappings showed moisture transudation within a few minutes, but the average asphaltum waterproofed caselining paper gave no transudation within a period of 24 hours or more. The combined bursting strength of the two basic kraft sheets has formerly been considered as a sufficient strength requirement. Tests of caselining papers, as compared with tests of the basic kraft papers used in making them, showed that the asphaltum lent an appreciable amount of strength. For this reason a bursting-strength requirement higher than that of the combined strength of the two basic kraft sheets is recommended to insure the use of kraft paper of the best quality.

The final specifications recommended after this additional study are: Weight, 24 by 36, 480, 90 pounds; water resistance by ground-glass method, not less than 24 hours; bursting strength, 70 points. It is thought that asphaltum of satisfactory quality is provided for by the severe water-resistance test and by a requirement that before applying the water-resistance test the specimen be creased, this revealing any tendency toward too great brittleness.—*Technical News Bulletin, Bureau of Standards.*

To Meet Regarding Tissue Simplification

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 2, 1925.—A general conference for the ratification of the tissue paper simplifications which has been proposed by the tissue manufacturers will be held on October 8 at the Drake Hotel, Chicago, under the auspices of the Simplified Practice Division of the Department of Commerce. H. R. Colwell of the Division has charge of this program on behalf of the department. The simplification meeting will be held directly following the convention of the National Paper Trade Association.

Pulp Market at Stockholm Slow

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 2, 1925.—Very little business has been done in chemical pulp during the past few weeks, according to a report to the Paper Division of the Department of Commerce from Commercial Attache Klath, at Stockholm. The report states further that it is anticipated that the entire production for the year will be sold within the next few weeks

Hydrogen Ion Concentration in the Paper Mill

By Merle B. Shaw[1]

Introduction

The importance of acidity in the making of paper is well recognized. It is essential that the stock should have a slightly acid reaction during at least a part of the beating process and at time of delivery to the papermachine. Measurements have long been made to detect acidity and to determine its amount, indicator paper being commonly used to detect the acidity and titration to determine its quantity.

It is now generally recognized that the "intensity" of an acid rather than its quantity is the essential factor in its activity and that the active constituent of all acids is the hydrogen ion. The intensity of acid solutions can be represented quantitatively only in terms of the hydrogen ion concentration.

Hydrogen ion concentration has recently attracted much attention in various fields. Applications are numerous in the chemical laboratory and are steadily increasing in the control work of industrial processes. Proper control of hydrogen ion concentration in the paper mill assists in obtaining better results in processess involving chemical reaction and in securing uniformity in the paper produced, and greater economy in cost of production follows therefrom.

HYDROGEN ION CONCENTRATION

1. Theoretical basis

The only constituent common to all acids is hydrogen, therefore, the characteristic property of acids must be due to hydrogen. Any acid in solution in water tends to dissociate into electrically charged bodies called ions, namely, the characteristic hydrogen ions and the other ions of which the acid is composed. Hydrochloric acid, for example, dissociates into hydrogen ions and chlorine ions; boric acid, into hydrogen ions and borate ions. This breaking up into ions is called ionization. The hydrogen ion concentration of a solution is the total amount of ionized hydrogen per unit volume of the solution.

Similarly, the characteristic properties of an alkali are attributed to the OH radical and the activity of alkalies to the concentration of the hydroxyl ions.

All substances capable of yielding hydrogen ions must be considered as being acidic. Equal volumes of solutions, containing equal amounts of acids, may vary enormously, however, in their degree of ionization. A strong acid ionizes to a much greater extent than a weak one.

The values for acidity obtained by measurement of the hydrogen ion concentration are not the same as those given by the ordinary titration methods. Titrations of tenth-normal hydrochloric acid and tenth-normal acetic acid with tenth-normal caustic soda, using phenolphthalein as an indicator, give the same results. One cubic centimeter of either acid will require one cubic centimeter of alkali to turn the indicator just pink, the neutral color of that indicator, and the acids apparently have, therefore, the same acidity. The hydrogen ion concentration, and therefore the intensity, of the hydrochloric acid, however, is from 60 to 70 times that of the acetic acid.

The reason for this difference is the continuous dissociation of acetic acid during the process of titration. Acetic acid has only a small, fixed percentage of ionized particles. When the alkali is added the ionized part is neutralized and a further fraction of the previously undissociated acid is then ionized. This continues until the hydrogen ion concentration becomes sufficiently reduced for the alkali to react with the indicator and the pink color results. Ordinary titration, therefore, only indicates ability of solutions to neutralize and does not show the concentration of the hydrogen ions present.

2. Expressed in terms of pH scale

Pure water is a very poor conductor of electricity but has a very slight conductivity, which is ascribed to its dissociation into electrically charged ions—positive hydrogen ions and negative hydroxyl ions. That is

There are an equal number of hydrogen and hydroxyl ions and at 21° C. each has a concentration of 1/10,000,000, $1/10^7$, or 10^{-7} grams per liter. Therefore,

$$\text{Conc. of H-ions} \times \text{conc. of OH-ions} = 1/10^{14}$$

Since there is a definite relationship between the concentrations of the hydrogen ion and the hydroxyl ion in all aqueous solutions, and since the product of the two concentrations is a constant, the value of one concentration determines the other. For example, acid when added to water partially dissociates into hydrogen ions and the other ions of which it is composed and the hydrogen ion concentration of the solution becomes greater than 10^{-7}. The corresponding concentration of hydroxyl ions therefore decreases according to the above equation. Thus if concentration of hydrogen ions equals 10^{-3},

$$10^{-3} \times \text{conc. of OH ions} = 10^{-14}$$

and

$$\text{conc. of OH ions} = 10^{-11}$$

For convenient analytic purposes solutions of acids, alkalies, and salts are made of normal and fractional normal strengths. Just as an acid solution is said to be normal when it contains 1 gram of acidic hydrogen per liter, so a solution is said to be of normal strength with respect to hydrogen ions when it contains 1 gram of ionized hydrogen per liter.

Instead of expressing the hydrogen ion concentration of a solution in terms of fractional normal strengths, as N/10, N/100, etc., the exponent of the denominator 10 is generally used and is called the "pH" of the solution. For instance, N/1000 concentration in respect to hydrogen ions is $N/10^3$ and the pH value is 3; or a solution of pH is $N/10^5$ and contains 1/100,000 gram of ionized hydrogen per liter.

Neutral, acid, and alkaline solutions can be clearly defined in terms of hydrogen ion concentration. As previously indicated, a neutral solution has at 21° C., a pH value of 7. Solutions of pH 0, pH 1, etc., below 7, are acid and pH 8, pH 9, etc., indicate increasing degrees of alkalinity.

3. Method of determination

There are two methods used to measure the hydrogen ion concentration of solutions. The more accurate one is electrometric and requires elaborate equipment for the determinations. The other is an indicator or colorimetric method and though secondary is based on and standardized by the electrometric method. The colorimetric method has distinct advantages for mill control work. Determinations can be carried out as a routine test without involving special apparatus or skill and when standard stock solutions are obtained the measurements can be quickly and easily made. The two essentials for the method are a series of indicators with well marked color changes covering a wide range of

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[1]Associate Technologist, Bureau of Standards.
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hydrogen ion concentration and stable standard solutions of known hydrogen ion concentration. Both are readily obtainable.

The indicators used are dyes in solution form. Each indicator has its characteristic pH zone and shows a distinctive color at the definite hydrogen ion concentration peculiar to this zone. If the solution is more acid than this zone, the indicator is transformed to its acid color; if more alkaline, to its alkaline color. The characteristic pH zone is comparatively narrow, and a series of indicators whose pH zones overlap is needed.

If the approximate pH value of the solution to be tested is not known the determination is made as follows. To test-tubes containing the unknown solution are added the different indicators. The color developed by each is compared with that of the standards for the given indicator. The pH value of the unknown is the same as for the standard whose characteristic pH zone matches the unknown in color.

The most used indicators with their pH ranges and color changes are as follows[2]:

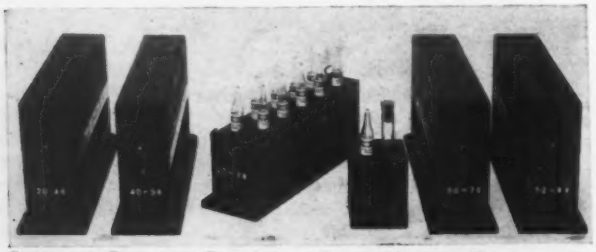
Indicator	pH range	Color change
Thymol Blue (acid)[3]	1.2—2.8	Red—Yellow
Bromphenol Blue	3.0—4.6	Yellow—Blue
Bromcresol Green	4.0—5.6	Yellow—Blue
Bromcresol Purple	5.2—6.8	Yellow—Purple
Bromthymol Blue	6.0—7.6	Yellow—Blue
Phenol Red	6.8—8.4	Yellow—Red
Cresol Red	7.2—8.8	Yellow—Red
Thymol Blue (alkaline)	8.0—9.6	Yellow—Blue

The standard solutions of known hydrogen ion concentration, with which the unknown solution is compared, are accurately defined solutions and generally consist of mixtures of some acid and its alkali salt.

MEASUREMENT OF ACIDITY IN BUREAU OF STANDARDS PAPER MILL

1. Procedure

For measuring the hydrogen ion concentration in the Bureau of Standards paper mill, five indicators are employed. These indicators cover a range of pH values from 3.0 to 8.8. Each indicator series is made up in consecutive units of 0.2 pH. The accompanying photograph shows the indicator sets and the comparator block used in making the determinations.



INDICATOR SETS AND COMPARATOR BLOCK USED IN HYDROGEN ION DETERMINATIONS

The color standards are sealed glass tubes containing 10 cc of solution of known hydrogen ion concentration to which has been added ½ cc. of indicator. An equal amount of indicator solution is added to 10 cc. of the sample to be tested, in a test tube of the same dimensions as those containing the color standards. By matching the color of the unknown with the color of the standards, the pH value of the former is read off directly. If the color produced by the unknown should fall between the colors of two consecutive standards the reading of the unknown is interpolated. For accuracy a ½ cc. pipette is used to measure the indicator.

[2] The author wishes to express his appreciation for information and suggestions received from Dr. W. A. Taylor, Director of the LaMotte Chemical Products Company, Baltimore, Maryland.

[3] These standards are made from highly acid mixtures and the colors of tubes pH 1.2, 1.4, 1.6, 1.8, and 2.0 will fade after a week or more due to slow precipation of the dye in solutions of this acidity. It is, therefore, advisable to purchase the proper mixtures and indicator solution separately and make up standards immediately before a determination is to be made.

2. Examples of applications

In the production of paper a knowledge of the hydrogen ion concentration is chiefly of importance in determining the alum required to produce the proper reaction of the paper stock when it reaches the machine. The water in which the fibers are suspended is practically always alkaline and the alkalinity is further increased by the sizing agent, which is commonly rosin soap. Sizing is added to paper to overcome the capillary action of the fibers and thus prevent ink from penetrating the sheet. In order that the size may be effectively precipitated on the fibers, the stock must have a slightly acid reaction when it reaches the paper machine. Papermakers' alum, (aluminum sulphate,) which was the kind of alum employed in this work, is generally used to neutralize the alkalinity and acidify the stock. The quantity of alum used is usually proportioned to the bonedry weight of the beater furnish with little or no regard to other influencing factors.

The writer is of the opinion that considerable economy in the use of alum and better control of the papermaking processes would be effected if an optimum degree of acidity were determined and observed in the mill. By regulating the pH value in the Bureau paper mill, the amount of alum used has been reduced one-third. The minimum solubility point for aluminum has been determined by investigators (see references) and found to be pH 5.0—5.5. In connection with other work in the Bureau mill the comparative effect of this and greater acidity on the finished paper was determined. Tests were also made to determine the relative value of alum and sulphuric acid for producing the desired acid condition. A description of the machine runs and data on the finished paper follow.

Run 1.—The beater for Run 1 was furnished in the following order: First, water and pulp; 1½ hours later, 2 per cent of rosin size 3 hours after addition of size, 2½ per cent of alum. One hour later the stock was dropped to the chest, ready to be run over the machine.

The pH value of the tap water added with the pulp was 7.3. The values for the beater waters were: before size was added, 7.2; after size was added, 7.8; and at time of dropping to chest, less than 4.0[4]. These values show a slight alkaline condition during nearly all of the beating, the stock being acid only the last hour, after the alum was added.

Tap water was used to wash down the beater stock and the resultant solution showed a pH value of 4.3. The machine water was made acid with alum to the same degree. The pH value of the stock at the head box was 4.3 throughout the run.

The finished paper was well sized and took a good finish and there was practically no foam during the run.

Run 2.—The beater materials were added as in Run 1 and in similar amounts, except the alum, only 1 per cent of which was used. The pH values are given in Table 1. The slight variation at the head box was due to the lower pH value of the machine water when starting the machine. The final value was 5.4, the same as that for the stock in the chest.

TABLE 1. COMPARISON OF pH VALUES FOR THE PAPERMAKING TESTS

Machine run	Acidifying agent	Beater water				Machine chest water	Head box water
		Tap water used	Before addition of size	After addition of size	After addition of alum		
		pH	pH	pH	pH	pH	pH
1	Alum	7.3	7.2	7.8	less than 4.0	4.3	4.3
2	Alum	7.3	7.3	7.7	4.6	5.4	5.2–5.4
3	Alum	7.3	5.4	7.0	4.6	5.4	5.4
4	Sulphuric acid	7.3	7.3	7.7	4.8	5.2	4.6–5.2

Rune 3.—The beater water of this run was made acid at time of furnishing. Alum was added as in the previous runs, the amount being that required to produce the same acidity as for Run 2.

[4] The indicator set of pH range 3.0—4.6 was not available at the time of making the measurements of this run, hence, the pH value could not be definitely determined.

TABLE 2.—MEASUREMENTS ON FINISHED PAPER

Machine run	Physical tests: Weight, 25 x 40, 500 lb.	Weight, 25 x 38, 500 lb.	Bursting strength pts.	Thickness in.	Ratio bursting strength to wt. 25 x 40, 500 %	Breaking strength 1 in. width: Machine direction lb.	Breaking strength 1 in. width: Cross direction lb.	Elongation: Machine direction %	Elongation: Cross direction %	Tearing strength: Machine direction g.	Tearing strength: Cross direction g.	Color: Reflection value Blue	Color: Reflection value Green	Color: Total relative brightness	Color: Per cent reflection Red	Color: Per cent reflection Green	Color: Per cent reflection Blue	Finish (gloss) average of wire and felt sides %	Opacity	Fiber composition: Sulphite pulp %	Fiber composition: Soda pulp %	Chemical tests: Ash %	Chemical tests: Resin %	Sizing quality Method of determination: Curl (21° C) sec.	Indicator (21° C) sec.	Valley (35° C) sec.	B. S. Electrolytic (21° C) sec.
1	55.8	53.0	23.2	0.0033	41.5	22.4	10.9	1.6	4.9	50.4	49.8	0.678	0.773	0.840	2.291	29.6	33.7	36.7	28.8	0.9110	50	50	0.47	1.80	24.1	72.1	46.8	75.0
2	54.8	52.0	24.8	.0034	45.3	21.6	10.7	1.6	5.1	50.6	44.6	.675	.767	.836	2.278	29.6	33.7	36.7	29.2	.9015	50	50	.41	1.62	23.9	67.9	34.6	60.6
3	54.7	51.9	23.5	.0033	43.0	22.3	11.5	1.4	4.9	54.4	46.4	.681	.775	.836	2.292	29.7	33.8	36.5	30.2	.9042	50	50	.40	1.69	22.1	62.6	28.5	51.4
4	56.9	54.0	24.8	.0034	43.6	21.4	10.7	1.4	4.6	56.0	48.2	.706	.798	.850	2.354	30.0	33.9	36.6	31.0	.9021	50	50	.36	1.67	0.0	0.0	0.0	0.0

Run 4—The procedure for this run was the same as for Run 2 except that sulphuric acid was added instead of alum to acidify the stock. The pH values of the beater waters were also the same as the corresponding values for Run 2 except for slight variation after the addition of the acid. The head box waters varied from 4.6 to 5.2, the slightly greater acidity being due to the condition of the machine water at the beginning of the run.

Discussion of Results

The measurements on the finished paper of the runs are given in Table 2. With the exception of degree sized, the differences in the quality of the papers are negligible. The sizing quality, however, gradually decreased for the first three runs and was inappreciable in the fourth.

The paper of Run 4, although highly absorbent, contained the same amount of rosin as the other papers. The degree of acidity, being the same as for Run 2, was also sufficient for effecting satisfactory sizing. The results indicate that not only acidity but also precipitation of aluminum ions in form of colloidal aluminum hydrate, etc., is necessary for effective sizing, as shown by Run 4, in which it was absent.

The mere presence of rosin in paper does not mean that the paper is sized. The rosin must be precipitated on the fibers in such a way as to make them ink-resistant when dry. The absorbent quality of the paper of Run 4 was ascribed to the rosin being left in the sheet by filtration when the water drained away from the fibers on the paper machine wire, the rosin particles being relatively large and not enclosing the fibers of the sheet.

Rosin Sizing

The function of sizing as previously mentioned, is to overcome the capillary action of the cellulose fibers and thus permit ink to dry without penetrating the sheet. The exact reaction of rosin size and alum is still a matter of controversy. Recent advances in colloidal chemistry, however, confirm the theory that it is necessary to consider the physical and electrical conditions involved as well as the chemical. In general, the following is a resume of the theories involving these conditions and will assist in explaining the results obtained above[5].

The rosin size, in the form of rosin soap, is a colloidal solution, the size of the particles varying within quite wide limits but the number of highly dispersed ones being sufficient to give good results. The dissociated alum and the beaten fiber of the paper stock also possess the characteristic properties of colloids.

Colloids have very large surface areas and a tendency to absorb other bodies, especially if they too are colloids. This tendency is partially surface tension and partially electrical. Absorption may take place if the particles are not electrically charged but is more marked if the bodies are oppositely charged.

The disperse particles of rosin and the suspended fibers of paper stock are both negatively charged. If disperse particles are charged with negative electricity coagulation will be brought about by hydrogen ions, which are positively charged. But since both the rosin and the fiber are negatively charged they are mutually repellant and the rosin is not precipitated on the fiber. Alum gives on dissociation positively charged trivalent ions of aluminum which act as a bridge between the fibers and the disperse rosin particles which become attached to the fibers.

Colloids having opposite charges will precipitate one another. Alum because of its positive trivalent ions is more effective in the precipitation than substances that dissociate into divalent or monovalent ions unless far greater concentration is used for the

[5] The following reference is an excellent discussion of this subject: "The mechanism of rosin sizing" by J. Melrose Arnot, The Paper Makers' Monthly Journal, London, April 15, 1925.

lesser valencies. The sulphate anions also aid coagulation of the rosin. Clark and other investigators (see references) have given the optimum pH value for precipitation of aluminum ions and presence of aluminum hydrate as about 5.0—5.5.

OTHER APPLICATIONS OF HYDROGEN ION CONCENTRATION IN PAPER MILLS

Mills using untreated river waters, usually find it necessary to purify the water, that is, remove turbidity and organic matter, and generally employ alum, and perhaps lime, in the process. Some of the references at the end of this article, indicate that hydrogen ion concentration is an important factor in this process, not only in the formation of alum "floc," but also in controlling corrosion of the water pipes.

The control effected by measurement of hydrogen ion concentration of the paper stock would, no doubt, also eliminate the sizing troubles due to seasonal changes in the alkalinity of the water and give more nearly uniform conditions in the beater and on the paper machine.

Hydrogen ion concentration is considered of value in paper and mordant dyeing processes. Still another advantage of acid control is greater stability in quality of paper. An excessive amount of alum may impart a stiffness or rattle but it is said to cause deterioration of the paper. The stiffness or rattle is better secured by other agents, such as glue or sodium silicate.

CONCLUSIONS

Carefully conducted tests of several investigators show that the maximum precipitation of aluminum occurs at a hydrogen ion concentration of pH 5.0—5.5, depending on the parts per million of alum used. A considerable saving in alum would in many cases be effected by adjusting the pH of the stock.

By regulating the pH value in the Bureau paper mill, the amount of alum used has been reduced one-third. The reduction possible in other mills depends on the particular conditions with which those mills have to deal, for example, degree of alkalinity of the water and whether a neutral or a high free rosin size is employed. The size used at the Bureau is a rosin soap of 33 per cent free rosin.

The use of sulphuric acid to produce the proper hydrogen ion concentration does not give satisfactory sizing in the paper. A certain amount of colloidal aluminum hydrate, supplied by alum, is required for effective sizing but the amount is minimum at the optimum pH value. The quantity in excess of that required to produce this value apparently has no favorable effect on the sizing quality of the paper.

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TECHNICAL SECTION, PAGE 96

Sulphite Cellulose Extract for Tanning Leather

Extracts prepared from the waste sulphite liquors discharged from pulp mills have been largely used as fillers in the manufacture of sole leather, without detriment to the wearing and ageing qualities. (Bureau of Standards Tech. Paper, No. 215.) As a consequence, laboratory experiments have been conducted to determine whether these materials could also be used in the earlier or actual tanning stages of the leather-making processes.

The first experiments were concerned with the use of sulphite cellulose extract as a pretannage, samples of hide being successfully introduced into liquors of ½, 1 and 1½ per cent tanning strength, after which they were tanned with an extract blend made up of ½ quebracho, ¼ oak, and ¼ chestnut. The total time of tanning was 24 days. The gain in weight was 70 per cent, and the leather had good color, wearing quality, and appeared to be also suitable for currying.

The second experiments consisted of tanning in a straight extract blend of 1/3 sulphite cellulose extract, 1/3 cutch, and 1/3 chestnut. The total time of tannage was 35 days. Samples of steer hide were used, and the tanning was done entirely in agitated liquors, and proceeded over a period of four months, during which time 10 lots of leather were made. The leather showed a gain in weight of 72 per cent, and on analysis showed a degree of tannage varying from 67 to 71.

These laboratory experiments indicate that sulphite cellulose extract may be used in the actual tanning process and that tanners might well investigate its use on a commercial scale and thereby utilize one of the cheapest raw materials available and at the same time practice conservation of a resource now largely wasted.—*Technical News Bulletin Bureau of Standards.*

Beckett Paper Co. Increases Insurance

HAMILTON, Ohio, September 1, 1925.—Expansion of its group insurance program, under-written by the Metropolitan Life Insurance Company, has resulted in increasing the total life insurance coverage on employees of the Beckett Paper Company, from about $240,000 to almost half a million dollars.

The entire cost of the original insurance is borne by the Paper company. Each employee, after completing six months' service, is insured for $500. This amount is increased $100 on each anniversary of employment until a maximum protection of $1,000 is attained. The present new policy is on a co-operative basis, employer and employees jointly paying the premium. Each contributing employee is insured for an additional $1000.

Both contracts contain clauses, which guarantee the full amount of his insurance in equal monthly installments to any employee who becomes totally and permanently incapacitated before age sixty.

Supplementing the actual provisions of the policies, which include exemption from medical examination, the Metropolitan Life offers service advantages. These include free visiting nurse service and the distribution of pamphlets on health subjects and sanitation.

Paper Production in Soviet Union Increases

WASHINGTON, D. C., September 2, 1925.—Paper production in the Soviet Union showed a big increase during the first half of the current Soviet fiscal year, October 1 to April 1, according to information received by the Russian Information Bureau here. The output of paper was 96,963 tons, as compared with 50,146 tons during the same period of last year, an increase of 93 per cent.

The output of cardboard was 8,903 tons, an increase of 36 per cent over the same period of last year, production of chemical pulp was 24,896 tons, an increase of 54 per cent, and mechanical pulp was 25,778 tons, an increase of 36 per cent.

Steam Used for Drying Paper

By J. O. Ross, President J. O. Ross Engineering Corp.

Question

"What additional steam is required on a newsprint machine to dry paper to a moisture content of 6 per cent, instead of one of 8 per cent?

For example: A certain machine requires 24,000 pounds of steam to dry three tons of paper to a 6 per cent moisture content in one hour. At this rate there would appear to be a saving of 200 pounds of steam (approximately) if the same three tons were dried only to 8 per cent of moisture. I think that more than this amount of steam will be saved in practice. Can you tell me whether this is so, and if so, what the additional saving is?"

Answer

In connection with your question in the *Pulp and Paper Magazine*, July 9, I am very glad indeed to answer this to the best of my ability. Your student does not state the percentage of moisture in the sheet entering the driers. He does, however, give a quantity of 24,000 pounds of steam to dry three tons of paper to a 6 per cent moisture content in one hour. He would probably be interested in the table given on page 40 of catalogue No. 10 of the Ross Engineering Corp. of Canada, Ltd. This gives the pounds of water evaporated per pound of dried paper with various percentages leaving and entering.

If we take a basis of 26 per cent entering the driers, which means 26 per cent of moisture entering the driers, the table shows that to dry this down to 6 per cent moisture, the evaporation of 2.620 pounds of water would be required per pound of paper. To dry it down to 8 per cent moisture, would require the evaporation of 2.540 pounds of water per pound of paper.

The number of pounds of steam required to evaporate a pound of water on machine driers varies somewhat, depending on leakage, circulation, method of removing water and air combined, etc. However, we have found, as a general rule, that, disregarding the steam required for ventilation, a fair average value is 1.4 pounds of steam per pound of water evaporated. Now, if we take the figure for drying the paper down to 6 per cent, or 2.62 pounds of water per pound of paper, and take 3 tons (6,000 pounds) of paper, it will be necessary to evaporate $2.62 \times 6{,}000 = 15{,}720$ pounds of water and with 1.4 pounds of steam per pound of paper, $15{,}720 \times 1.4 = 22{,}008$ pounds of steam would be required. This does not quite check up with your student's figure of 24,000 pounds; but this might be due to the fact that he had more moisture in the sheet entering the driers, or that our figure of 1.4 pounds of steam per pound of moisture does not hold true on his machine. The relation of 6 per cent and 8 per cent would still hold true.

Now let us take the same condition, but drying the paper down to 8 per cent. This will require that 2.54 pounds of water be evaporated per pound of paper, or $2.54 \times 6{,}000 = 15{,}240$ pounds of water for 6,000 pounds of paper. Assuming 1.4 pounds of steam per pound of water, the total steam required would be $15{,}240 \times 1.4 = 21{,}336$ pounds. The difference between the two results is $22{,}008 - 21{,}336 = 672$ pounds, instead of the 200 pounds that your student seems to think is low, and evidently is quite low. If he will take the table before mentioned, he can solve this himself under any conditions.

Now, in addition to the steam required simply to evaporate the water, there is a ventilation loss. It takes so many pounds of air to carry away so much moisture; and this air must be heated somewhere in the mill from outdoor temperature to the temperature at which it leaves the mill in the form of exhaust. To get this amount, we proceed as follows:

The difference between 2.62 pounds of water per pound of paper and 2.54 pounds is 0.08 pounds, which represents the additional water that would have to be removed per pound of paper to dry the paper to 6 per cent instead of 8 per cent. As there are 7,000 grains in a pound, the additional moisture to be removed by the ventilating system is $0.08 \times 7{,}000 = 560$ grains per pound of paper. Assuming a wet-bulb temperature of the vapor of 100 degrees and an outside temperature of 0 degrees, the exhaust air would carry out 300 grains of moisture per pound of air. Therefore, in order ot carry out 560 gains, it would require $560 \div 300 = 1.9$ (nearly) additional pounds of air per pound in the ventilating system. Assuming this would leave the ventilators at 110 degrees, you would have to heat this air from 0 degrees to 110 degrees which would require approximately $110 \times 1.9 \times 0.241 = 50.4$ B. t. u., say 0.05 pounds of steam per pound of paper.

On the driers themselves, we have assumed that it takes 1.4 pounds of steam per pound of water evaported; and to dry out this additional 0.08 pounds of water would require $1.4 \times 0.08 = 0.112$ pounds of additional steam in the driers. Adding to this the 0.05 pounds additional for ventilation, gives a total of $0.112 + 0.05 = 0.162$ pounds of steam required additional per pound of paper dried.

Your questioner has evidently had some experience with Briner economizers. We would, therefore, state that we have worked this out as to what additional steam would be required if a Briner economizer were used under these conditions. The Briner economizer would undoubtedly heat the air from zero to 85 degrees. We would, therefore, have to heat the additional 1.9 pounds of air from 85 degrees to 110 degrees, which would take approximately 0.012 pounds of steam, which, added to the 0.112 pounds steam required on the driers, would give a total of 0.124 pounds of steam additional per pound of paper for drying paper to 6 per cent instead of 8 per cent.

British Concerned About More Australian Mills

[FROM OUR REGULAR CORRESPONDENT]

Washington, D. C., September 2, 1925.—British paper exporters are expressing some concern over the report that as a result of extensive experiments with Australian woods, the Amalgamated Zinc Ltd., is seriously contemplating the establishment of pulp and paper mills in Australia, according to reports received here.

The Australian company states that raw materials such as limestone, sulphur ores, etc., as well as wood are readily obtainable in the vicinity of the proposed plants, and has announced that if the desired tariff protection is furnished by the Commonwealth government that it will be in a position to produce paper within a short time. The company's program looks to eventually supplying the entire demand for news print. Australia during the past few years has been taking from 55 to 60 per cent of the printing paper and from 40 to 45 per cent of the writing paper exported by Great Britain.

Anglo-Canadian Pulp Co.'s New Mill

[FROM OUR REGULAR CORRESPONDENT]

Montreal, Que., September 1, 1925.—Preliminary work has started on the new $15,000,000 Anglo-Canadian Pulp and Paper Company's mill in Limoilu, Que., workmen now being engaged in taking soundings, etc., so as to have everything in readiness for the engineers when they decide upon the location of the projected foundations. Tenders will most likely be called early in January, while work on the mill itself is expected to get under way in the early spring.

* From Pulp and Paper Magazine, July 30, 1925.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Paper Specialties

Safety Paper. A. J. Murray assignor to Todd Protectograph Co. U. S. pat. 1,514,222, Nov. 4, 1924. Paper is printed with different inks containing reagents such as disanisidine, potassium nitrite, lactic acid and a phenol or aromatic amine which combine to form an insoluble azo color within the body of the paper.—A. P.-C.

Modern Bank Note Paper. E. Belani. Wochbl. Papierfabr. 55, 3169-3172 (Dec. 6, 1924). A modern bank note paper should possess good folding endurance (about 1,200 double folds); it should be mottled with dots or stripes of different fibers, prepared from fibrous raw materials seldom used for other puposes; its interior should be metallized; its watermark should be distinct; the paper should weigh 75 g. per sq. m., should possess a surface with a medium smoothness, be fast to light, and be capable of being printed satisfactorily.—J. L. P.

Cable Paper. Anon. Zellstoff U. Papier 4, 309-311 (Dec. 1924). Cable paper, for electrical insulation purposes, must have a high tensile strength and great flexibility, with a corresponding stretch. It should be completely free from metals, acids, and decomposable salts, and must be uniform in strength and quality, both with and across the machine-direction of the sheet. Manila fibers form the best material for cable paper; soda pulp of a particular grade may also be employed, or mixtures of these and other materials. The physical and chemical properties of telephone and high-tension papers are described. The cylinder machine is better adapted to the manufacture of such papers.—J. L. P.

Flexible Sheets for Patterns. Firma Wilhelm Koreska. Ger. pat. 400,662. Papierfabr. 22, 459-460 (Sept. 28, 1924). Paper is soaked in a mixture consisting of 3,000 parts, by weight, 5 per cent aqueous protein solution, 360 parts 50 per cent aqueous solution of ammonium stearate, 720 parts 50 per cent aqueous solution of ammonium oleate, and 3,600 parts water. After drying, the sheets are passed through a strong formaldehyde solution.—J. L. P.

Straw Pulp Manufacture. Walter Sembritzki. Papierfabr. 22, 580 (Dec. 7, 1924). An addition to the article on the history of straw pulp manufacture in the special number of Papierfabr. (June 1924).—J. L. P.

Manufacture of Carbon Paper. Chem. Fabrik Adolf Heinemann. Ger. pat. 405,842. Papierfabr. 22,583 (Dec. 7, 1924). In the manufacture of carbon paper the solvent or suspension medium of the dye consists of hydrogenated oil or fat.—J. L. P.

Coating for Stencil Paper. A. de Waele. Eng. pat. 216,648. Paper for the preparation of stencil sheets may be formed by coating Yoshino paper with a solution of ethyl cellulose in an organic solvent mixed with castor oil or other oleaginous material. Other ethers of cellulose or starch may also be used.—A. P.-C.

Marking Carbon Paper. W. J. Hughes. U. S. pat. 1,513,246, Oct. 28, 1924. A printed marking is applied to paper in printers' ink and an overlying coating of carbon-ink is then applied over the paper and marking.—A. P.-C.

Manufacture of Metallic Paper. Herbert Glootz. Ger. pat. 401,514. 22, 475, (Oct. 5, 1924). Two sheets of metallic paper, formed by spreading a metal powder on a sheet covered with an adhesive, are passed over a roll with the metal sides together, thus yielding a superior sheet.—J. L. P.

Concentration of Spent Sulphuric Acid Liquor from Paper Parchmentizing Plants. M. Servebriquet. Papier 27, 1421-1424 (Dec. 1924). Description of the cascade type of concentrator and of its drawbacks; and of the Kestner sulphuric acid concentrator and of its merits.—A. P.-C.

Manufacture of Glassine Paper. A. Rettori. Papeterie 46, 1157-1160 (Dec. 25, 1924). Practical manufacturing directions.—A. P.-C.

Continuous Gumming Machines. Maurice Cartiaux Fils. Papier 27, 1157-1165 (Oct. 1924). Description of the evolution of machines for the continuous gumming of paper on cardboard webs.—A. P.-C.

Safety Paper. W. J. Murray assignor to Todd Protectograph Co. U. S. pat. 1,509,872, Sept. 30, 1924. In order to obtain a permanent printed record on sized paper, the paper is impregnated with sodium nitrite, and an ink is used containing dianisidine, beta-naphthol and oleic acid.—A. P.-C.

Filter Mass. G. Bonnet. Papier 27, 1167-1170 (Oct. 1924). Description of the special properties required for this material and of its manufacture, indicating the precautions to be taken to get the desired results.—A. P.-C.

Fiber Board. G. J. Manson. Can. pat. 245,539, Dec. 23, 1924. A bituminous material emulsified with clay is applied to the plies of fiber board while wet to produce a new multiply fiber board.—A. P.-C.

Latex Paper Board. E. Belani. Papierfabr. 22, 568-570 (Nov. 30, 1924). Latex paper board, which is highly pressed, is manufactured from paper or pulp together with fused naphthalene, or its derivatives, alone, or mixed with solutions of rosin, asphalt, or sulphur, according to Ger. pat. 394,771. The fibrous raw material consists of 60 parts old paper, 10 parts pulp, and 30 parts asbestos. The mixture is beaten to a coarse mass and weakly sized with latex. The paper is made on a longitudinal wire machine and then treated with the above chemicals. The new Naumann-Schopper paper tester is recommended as suitable for this product.—J. L. P.

Fiber Board. A. L. Clapp assignor to Beckwith Manufacturing Co. U. S. pat. 1,514,655, Nov. 11, 1924. Cellulosic material, e. g., cotton waste, is digested under the action of heat and pressure with animal matter, such as tanned leather, ground bone, or fish scraps, and with caustic alkali and the animal matter in solution is precipitated by sulphate of alumina, lead acetate or other metal salt to form a coherent strong fiber board material.—A. P.-C.

Method of and Apparatus for Manufacturing Coated Paper Board. C. C. Colbert and G. E. Preston. U. S. pat. 1,514,439 (Nov. 4, 1924). The material is successively formed, dried, calendered, coated and finished as a continuous strip without reeling it through the manufacture.—A. P.-C.

Corrugated Board. Pulp and Paper 22, 1282 (Dec. 18, 1924). A brief discussion of the importance of selecting the proper grade of silicate of soda for different purposes in the manufacture of corrugated boards.—A. P.-C.

"Papyroplastik." E. Belani, Papierfabr. 22, 99-108 (June 17, 1924). A descriptive article dealing essentially with the mechanical side of the "papyroplastik" process, which is used in the manufacture of the containers from wood pulp and a binder. The author states that the containers are resistant to lyes, acids, water, and atmospheric conditions, and are cheap to make.—J. L. P.

Uneven Thickness of Paper Board. Hoyer. Papierfabr. 22,

490-493 (Oct. 19, 1924). The causes of the uneven thickness of paper board are taken up in a general way.—J. L. P.

Treatment of Paper Board Stock. E. Belani. Papierfabr. 22, 541-544 (Nov. 16, 1924). Essentially a review of patents covering the special treatment of paper board stock—J. L. P.

Pulp Board. G. Landt and H. L. Becher assignors to Agasote Millboard Co. Eng. pat. 220,657. Pulp board, which is waterproof and highly dielectric, and may be used for roofing or siding of buildings and as treat material for steps, made from any of the usual paper pulps, is dipped in melted montan wax, the final product containing 30 to 50 per cent. The wax may be introduced into the pulp in the beater as an emulsion, or the dried pulp board may be dipped in a solution of the wax. The board so produced may be rendered plastic by heat and bent to suitable form, or it may be embossed. Ozokerite may be used instead of montan wax.—A. P.-C.

Impregnated Fiberboard Containers. J. W. Webb. U. S. pat. 1,512,729, Oct. 21, 1924. Fiberboard boxes are impregnated with sulphur in order to stiffen and waterproof them.—A. P.-C.

How Roofing Paper Is Made. F. Hoyer. Paper 35, 450-452 (Jan. 1, 1925). See Pulp & Paper 23, 40 (Jan. 8, 1925); Paper Trade J. 80, No. 1, 48 (Jan. 1, 1925).—A. P.-C.

Rubberized Paper. Rubber Latex Research Corporation. Fr. pat. 581,211. The paper is impregnated with diluted rubber latex and then dried. Sulphur or ammonium sulphide may be mixed with the latex, and the rubber is then vulcanized during drying. —A. P.-C.

Waterproof Box Board. L. Kirschbraun. Fr. pat. 582,646. Means are provided for applying material such as asphalt, pitch, tar, paraffin, etc., preferably in the form of a non-adhesive emulsion, between two or more plies formed on a multi-cylinder board machine.—A. P.-C.

Composite Building Board and Method of Making Same. C. W. Utzman assignor to the Beaver Products Co., Inc., U. S. pat. 1,492,588, May 6, 1924. Plaster board is covered with sheets of paper which are wide enough to leave margins for folding over the edges of the plaster board. The thickness of these margins is reduced so as to provide a thin edge, which is pasted in place and practically merges into the surface of the board.—A. P.-S.

Process of Making Shingle Elements. K. Schutte assignor to Flintkote Co. U. S. pat. 1,494,380, May 20, 1924. An aqueous emulsified bituminous matrix containing colloidal clay is applied to one side of a saturated felt; the vehicle for the bitumen is removed thereby allowing the bitumen to coalesce; and a bituminous coating is then applied to the other side of the felt.—A. P.-C.

Manufacture of Sand Paper. Minnesota Mining & Manufacturing Co. assignee of F. G. Okie. Eng. pats. 194,274 and 219,341, Feb. 6, 1923. A gum varnish, preferably a linseed oil dammar varnish, applied under pressure to a flexible porous base so that the base is permeated almost to the underside, is used as the binding agent for the abrasive material in the manufacture of waterrate (to accelerate the adhesion of the binder to the base) and white lead (to accelerate the drying of the varnish at its exposed surface) may be used as driers, preferably in conjunction with proof and highly flexible waterproof sand paper. Manganese bopaste drier, containing, for example, as mineral constituents lead acetate and manganese resinate, and a japan drier. A varnish, consisting largely of linseed oil, boiled until it becomes almost solid, is added to give body to the composition. Where the sand paper is to be sent to a dry climate, or where a considerable period elapses between its manufacture and use, it may be desirable to modify the action of the drier, or even to incorporate a small quantity of a non-drying oil, such as castor oil. Sand paper made by this process requires no sizing, is capable of carrying increased quantities of abrasive material, and can be used on wet surfaces; by the removal, subsequent to manufacture, of one or more of the outer layers of the base, sand paper of extreme thinness and flexibility may be obtained.—A. P.-C.

Apparatus For Impregnating Paper Articles and Rendering Them Rigid. Manufacture de Machine Auxiliares pour L'Electricite et L'Industrie.Fr. pat. 566,098, Nov. 17, 1923. The process is particularly suitable for tubes used in spinning mills, for impregnating them with synthetic resins. The tubes are placed in a tank, subjected to a vacuum to remove moisture and air, the impregnating liquid is introduced and allowed to act either under pressure or under partial vacuum for a length of time depending on the degree of impregnation desired. The impregnation liquid is then withdrawn, and the articles are heated in the same container, so as to remove the solvent (if any) and at the same time to bake and harden the tubes and render them waterproof. Air may be passed through during heating if it is desired to oxidize the impregnating substance.—A. P.-C.

Process For Impregnation of Vulvanized Fibre Sheets or Articles Manufactured From the Same. Deutche Sprengstoff Akt.-Ges. pat. 405,785. Papierfabr. 22, 585 (Dec. 7, 1924). Vulcanized fibre sheets or articles are dipped or soaked with a solution of collodion.—J. L. P.

Manufacture of Wax Paper of Great Folding Endurance. Chemische Fabrik Adolf Heinemann. Ger. pat 405,841. Papierfabr. 22, 585 (Dec. 7, 1924). To the wax material, used in the manufacture of wax paper, are added hydrogenated oils or fats. A dye may also be added to the mixture. The resulting paper has a high folding endurance.—J. L. P.

Fireproof Paper. N. F. Newman. Eng. pat. 222,035. This improved fireproof paper is prepared from blue or yellow asbestos, to which a small proportion of wood pulp and starch (1% of each) is added. Blue and yellow asbestos fibres are stronger than white asbestos, and more resistant to heat.—A. P.-C.

Manufacture of Non-Inflamable, Tar-Free Roofing Paper. Fabrik K. C. Menzel and Paul Meyerburg. Ger. pat 405,299. Papierfabr. 22, 573-574 (Nov. 30, 1924). Roofing paper is coated with mineral substances, such as oxide or carbonate of calcium and magnesium, and cover with a solution of water glass or magnesium chloride.—J. L. P.

Preparation of Fancy Colored Paper. Farwerke vorm. Meister Lucius and Bruning. Ger. pat. 405,613. Papierfabr. 22, 575 (Nov. 30, 1924). A device is described for distributing colored fibers on a sheet of paper either on the screen or the felt of the paper machine.—J. L. P.

Preliminary Acidification of Fibrous Materials Before Carbonization. Walther Loew Beer. Ger. pat. 406,044. Papierfabr. 22, 597-598 (Dec. 14, 1924). The fibrous material is given a surface treatment with carbonizing liquid, consisting of an aqueous solution of sulphuric acid, preliminary to the carbonization operation. In this treatment pressure is applied by means of rolls. —J. L. P.

Waterproof Asphalt Paper. L. Kirschbraun. Eng. pat. 226,-735. The process consists in forming the layers on different cylinder molds and interposing a bituminous emulsion between each two layers, and causing the layers to set by cooling each sheet before calendering.—A. P.-C.

Imitation Leather. K. L. Moses. Eng. pat. 226,422; Fr. pat. 579,350. Rubber is incorporated with the pulp. The sheet is saturated while wet subjected to rubbing action, which imparts an appearance and feel resembling chamois.—A. P.-C.

Stiffening Paper and Cardboard. Manufacture de Machines Auxiliaires pour L'Electricite et L'Industie. Eng. pat 215,726. The paper or board to be stiffened is placed in a heated chamber where it is dried under vacuum so as to eliminate moisture and air from the pores. The stiffening agent is introduced into the chamber. When the material is thoroughly impregnated the surplus stiffening material is drawn off and the chamber reheated in order to dry,

and if necessary bake the material so that it becomes rigid and impermeable.—A. P.-C.

Improved Rubberized Paper. Rubber Latex Research Corp. Fr. pat. 581,211. A rubber-impregnated paper, in which the solid rubber particles are in the form of a dry or practically dry gel, is obtained by impregnating the paper with a solution of rubber latex and then drying the impregnated paper. It is claimed that this paper is elastic and non-hygroscopic, that it has high folding endurance, and that its strength is practically uneffected by moisture.—A. P.-C.

Asbestos Paper. N. Sulzberger. U. S. pat. 1,518,944, Dec. 9, 1924. A paper for wrapping cigarettes is formed of asbestos mixed with potassium nitrate or other oxidizing agent and cellulose acetate, sodium silicate, or other binders.—A. P.-C

Emulsifying Asphalt or Similar Materials. L. Kirschbraun. U. S. pat. 1,517,075, Nov. 25, 1924. A substance, such as oleic acid, which on saponification form an emulsifying agent, is added to hot liquid asphalt or a similar liquid waterproof adhesive binder, followed by the addition of a saponifying agent such as caustic soda, and after through admixture and emulsification there is also added an aqueous paste containing clay or similar colloidal material. The product is adapted for waterproofing paper in its original manufacture.—A. P.-C.

Baryta Paper. Th. Bentzen. Paper Trade J. 80, No. 6, 195-203 (Feb. 5, 1925); Paper 35, No. 17, 104-110 (Feb. 12, 1925); Paper Mill 49, No. 8, 4, 10, 10a (Feb. 21, 1925). A description and discussion of the manufacture and testing of photographic paper based on the authors personal experience in the industry.—A. P.-C.

Paper Manufacture. Wiggins, Teape & Co., Ltd. Eng. pat. 222,779. Two or more kinds of pulp are fed side by side on the usual travelling wire. The supplies of pulp are separated by rubber or rubberized fabric deckles of very small dimensions, and which terminate at the end of the travel of the pulp on the wire, at which position the adjacent runs of pulp spread or merge one into the other, so that when the composite sheet of pulp passes to the presses a sheet of paper is obtained comprising two ore more distinct styles integrally joined.—A.P.-C.

Manufacture of Leather Board and Leather Paper. Viktor Scholz. Ger. pat. 401, 703. Papierfabr. 22, 486-487 (Oct. 12, 1924). Waste leather in alkaline solution at a 50% concentration, is mixed with materials and precipitated by adding aluminum sulphate or other precipitants in a beater. The leather product is made insoluble and hardened with formaldehyde.—J. L. P.

Machinery

Process of Filling Pulp Digester With Wood. Koholyt Akt.-Ges. Ger. pat. 405-100. Papierfabr. 22, 562-563 (Nov. 23, 1924). During the cooking process more wood is added to the digester, or the wood and cooking acid are added to the digester simultaneously, the excess of acid subsequently being transferred to another digester or some tank. In this way more wood can be added to the digester.—J. L. P.

Roll Coverings & Their Manufacture and Treatment. F. Ahrens. Papierfabr. 22, 556-557 (Nov. 23, 1924). General information concerning the manufacture and care of roll coverings, with special reference to rubber coverings. Frequent washing of the rubber with benzine removes oil and grease which act to swell the material. Temperatures up to 130° C. are not harmful to the rubber provided that the pressure, under which the rolls are required to operate, is not excessive.—J. L. P.

New Method of Washing Book and News Fibers. W. J. Garding. Paper Ind. 6, 1579 (Dec. 1924). The washer, which is based on the incline screen principle in conjunction with the De Zurik Nozzle Shower Spray, consists of four units, each having three screens built at an angle to cause the stock to flow over them readily by gravity. The stock is pumped into a head box over the top screen, whence it flows over the first screen to a mixing box at the head of the second screen. The fiber is thoroughly agitated and washed by the sprays in the mixing box, after which it passes over the second screen to another mixing box and then over the third screen of 13% in production (of deinked fibers) and 83% decrease in horsepower consumption, and the color of the washed fiber is so much better than when using drum washers that bleaching can be dispensed with.—A. P.-C.

Rotary Pulp Screen. F. Twaalfhoven and H. Rinderknecht. Fr. pat. 577,799. The invention consists essentially in providing a stationary drum inside the rotating screen drum. This stationary drum is opened at the bottom, to allow the stock to enter into it. The level of the stock depends on the air pressure in the top of this cylinder, and can be adjusted to within very narrow limits by suitable variation in this pressure. The level of stock can be made to fluctuate by means of impulses in the air above it, the rate and intensity of which can be regulated at will. These impulses are transmitted to the stock, and prevent clogging of the screen plates. Also, any foam which might form would be left inside the hollow drum. The opening at the bottom of the inner cylinder may be closed by a suitable elastic membrane, without any direct contact of the pulp with the fluid causing the impulses. The level of the stock inside the screen drum can also be vibrated by rotation of an eccentrically mounted cylinder or roll.—A. P.-C.

Improved Rotary Screen. Richard Carter. Eng. pat. 218,036, July 3, 1924. The screen is built up of rings, hoops, etc., arranged side by side at a slight distance apart and held concentric to a common axis by means of a series of rods, the extremities of which are supported by end disks or caps between which the rings or hoops are clamped, the spaces between the rings or hoops forming the slits which extend all around the screen, no part of each slit being interrupted, except to a very small extent by the means used for supporting the rings. For positively keeping the slits clear of the heavier pulp, dirt, etc., a bar or like carrier is provided alongside and parallel with the screen, and on this bar are thin metal blades, preferably one for each slit, and arranged so that on the bar moving in one direction each blade enters one of the slits and forces any heavy pulp back into the screen tank, while when the bar is moved in the reverse direction the blades lie clear of the slits.—A. P.-C.

Pulp Screen. J. Paramor assignor to The Watford Engineering Works, Ltd. U. S. pat. 1,497,156, June 10, 1924. The drums are supported upon and vertically above eccentrics by which a rapid dither is imparted to the rotating drum, which is guided in its vertical movement by means of rollers arranged on its opposite sides. Independent means are provided for slowly and constantly rotating the drum.—A. P.-C.

Delivering the Stock to the Paper Machine Wire. F. Venneman. Mon. Papeterie Belge 4, 473-481 (Oct. 1924); Paper 35, 313 (Dec. 11, 1924); Paper Trade J. 79, No. 26, 43-44 (Dec. 25, 1924). A discussion of the effect of the velocity with which the stock flows from under the last slice. Best results regarding formation and strength of the sheet are obtained when the velocity is equal to the speed of the wire. The velocity of the stock depends on the head (h) of stock back of the last slice, and in order to deliver the stock at the same speed (v) as the wire, we must make $h = v2/2g$, where g is the acceleration due to gravity. —A. P.-C.

Improving the Efficiency of Suction Boxes. J. Huebner and E. Arden. Eng. pat. 221,311. Extraction of a larger quantity of water at the suction boxes with a smaller power consumption is obtained by arranging an endless travelling apron of waterproof fabric in such a manner that it forms an airtight cover to the web as it passes over the suction boxes.—A. P.-C.

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COST ASSOCIATION OF THE PAPER INDUSTRY

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THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Dangerous Selling Prices*

Avoided by Knowledge of Economics of Pricing and Analysis of Industry and Its Markets

By W. L. CHURCHILL, CONSULTING ENGINEER

Seventy per cent of American manufacturing industries earn less than $5,000 per year net profit. This fact, compiled from government reports covering all industries listed as "manufacturing", indicates a low level of average earnings as a result of activities calling for more than ordinary skill, ability, initiative, experience and investment.

It may be argued that the more than 200,000 manufacturers included in this classification comprise many who employ but a few people and to whom $5,000 profit would be equivalent to millions earned by larger concerns. Against this may be offered the opinion that anyone embarking in a manufacturing enterprise with expectation of averaging to earn less than $5,000 per year profit, has small appreciation of his value, and of the risks he is taking with his own or his investors' money and credit. Neither do the other 30 per cent of manufacturers make such extravagant earnings as to permit investment in manufacturing enterprises as a whole to show returns that are at all comparable with the services rendered.

What is the reason for this situation? As a nation we have led the world in the production of articles, and in the development of devices and commodities to produce. Manufacturers have been and are constantly striving to turn out more per person employed, and to reduce the prices of their products to consumers so that there may be more goods consumed. This has been done in the face of increasing wages, salaries, and unit costs generally.

Unfortunately for the manufacturer, he has done such a good job at production that he has overtaken distribution. Neither can he fairly blame the World War for all of his troubles in this direction, although it did greatly stimulate his activity toward development of methods for maximizing output, and definitely and quickly elevated standards of living, wages and salaries.

Many manufacturers blame their poor showing upon the greatly increased productive capacity, and the World War as responsible for that capacity. At the same time they live in the hope that some day consumption will overtake capacity and profits will follow. As a matter of fact, even industries that were restricted by war operations are in as deplorable a situation in regard to lack of profits as many that were specifically brought into being by the war.

No, the trouble is not due to over-capacity, or over-production, but to unintelligent (to express it mildly) pricing. It is unintelligent pricing that has insidiously lowered earnings in manufacturing enterprises to an extent that, despite the better wages of manufacturing employees and the improved salaries of the executive and administrative forces, has penalized the stockholders who not only obtain less today per dollar of dividend received but obtain fewer of these dollars as a return on their investment in manufacturing enterprises than formerly.

There is no question as to our increased production per employee, as witness the recent survey report of the Industrial Research Bureau to the effect that production increased 185 per cent in 25 years while the number of wage-earners increased but 90 per cent. This report also states that labor has definitely fallen off since 1914 due to administrative and technical improvement in utilization of both labor and power. A recent report issued by New York State Industrial Bureau, shows exactly the same number of persons employed at gainful pursuits in 1924 as in 1913.

The Lower Profit Margins

To encourage still further increase in production the manufacturer has lowered prices until profit margins have become extremely narrow as compared with earlier years, and slight errors in estimating or calculating costs of production and distribution, or the possible consuming ability of his trade, or his organization to dispose of his product, leave him with lessened profits or actual losses.

One of our largest associations of manufacturers recently prevailed upon a man who had retired from that particular business about 12 years ago, to act as their secretary and general adviser in efforts to put the industry on a more healthful basis financially. This Assocaition had undertaken a typical program of uniform cost system installation and one of the first duties of the new secretary was to stimulate and develop interest in this work. He was amazed at the change in profit margin that had developed since his active connection with the industry, saying:

We used to add labor, material and overhead, then put on 33 1-3 per cent for profit. Of course, we didn't make that profit because errors and omissions would bring it down so that we sometimes ended the year with as little as 15 per cent net. But say, look at these cost sheets! Why, these fellows are only add-

* From "Management & Administration."

ing 15 per cent and some only 10 per cent! No wonder they wind up the year with a zero profit or a deficit! I wouldn't dare to do business on such a narrow margin, as a few errors or omissions that are almost inevitable will wipe it all out and maybe something besides.

Neither has uniform costing been able fully to correct the evil of unintelligent pricing. In some instances it has had a directly opposite effect or perhaps it would be fairer to blame faulty application of uniform costing, as in the case of one of our oldest established job printing businesses located in the Metropolitan District. It had adopted and was using religiously (too religiously it was afterwards proved) a system of costing and pricing recommended by an associated group of printers who were earnestly trying to improve the general status of their industry.

Now, in the Metropolitan District there are something like 1500 job printers. This particular firm had from its long years of activity and progressiveness developed much technical skill, accumulated equipment for high-grade multi-color work, and unusual artistic taste for producing attractive catalogues and other better class printing. For a period of several years after adopting the unifom cost system their business shrunk progressively until it was down to about one-half former proportions, and growing deficits precipitated an investigation into the causes. Fortunately, the reason was found in the faulty pricing principles that automatically over-priced all quality products while underpricing the so-called chicken-feed business of letter-heads, cards, envelopes, etc. Their salesmen had given up practically all effort toward securing large order for high-grade work as they had invariably found themselves under-bid. This left most of their larger and more expensive equipment idle while their little jobbing presses were swamped with what was proved to have been a very unprofitable business.

Correcting their faulty pricing principles soon restored their business to a profitable basis.

Under-Pricing Not Only Danger

This case is cited to show also that unintelligent pricing is not confined to under-pricing. Neither are such combinations as over-pricing to drive business away, and under-pricing to encourage unprofitable business, confined to job-printing. Nearly every sizable industry making a product or a variety of products with wide range of values suffers from this insidious evil. Some do so knowingly and trust to the "law of averages" to enable them to overcome the tendency to lower profits, but in most cases it exists from faulty ideas as to how profits should be applied to products, to arrive at selling prices.

In one of the clothing industries, making a standard line of wearing apparel, the cost sheets of three standard articles of one firm, selling at $15, $40 and $120, were priced according to six different methods of applying profits, used in the industry by different members with the following results: The $15 article according to one manufacturer ought to sell for $14 as at $15 it was bringing an exorbitant profit. On the other extreme was a manufacturer who contended it should bring $27, and that it could not be sold profitably for less. Here is a difference of almost 100 per cent in supposed correct selling prices, both built from the same cost and each aiming at the same amount of annual profit on the same assumed volume of production.

The explanation in the pricing of the $120 goods, as No. 1 who priced the $15 article at $14 contended that the $120 article should sell at that price to insure the designated profit, while his neighbor, who demanded $27 for the low-priced article, contended that according to his way of profiting it only needed $79 to earn the profit desired.

The $40 garment was priced at that figure by all but one of the six who figured that $34 was the fair selling price. On the other grades there were two who priced alike and correctly while four were high on one and low on the other. They all averaged to earn the same amount.

Now, when you can get differences of nearly 100 per cent in supposed fair selling price from exactly the same cost, aiming at exactly the same profit total for the year and the same total number of units produced, it is easy to understand why an industry can be, on the whole, very unprofitable.

Of course, the low-priced party in each line sets that price for his competitors to meet, and no matter how honestly he has established that price nor how accurately he has figured his costs, to his competitors he is a "price-cutter," and is usually referred to with uncomplimentary expletives prefixed to the term.

He in turn finds that in some other class in his line someone else is away under-pricing him, and no matter how honestly the latter price has been arrived at, nor how accurately it was costed, it is "all wrong" in his opinion and the firm naming it is the "price-cutter". The trouble is chiefly a difference in ideas as to the minimum volume of business on which profits should be earned, and how profits should be applied; to a lesser extent faulty cost conclusions and different profit ideals enter.

There are still a few manufacturers who believe that they are engaged in a cave-man warfare and that success in business simply means the survival of the fittest. "If they beat the other fellow to it they may win out."

Happily this notion is fast disappearing as it is no longer an effective means of permanent success. Most manufacturing enterprises require more or less special equipment for their special product and no matter how many firms or how often the management of a plant may fail, the equipment stands ready to go into production and some way, somehow, somebody gets it going again. Corporations may die, but unlike humans they do not stay dead. When resurrected they are apt to be worse competitors of those who put them out of business than before.

Impossible to "Beat Other Fellow"

Besides all of this, with the development and improvement in financing methods, the many mergers, combinations, and affiliations of industries with one another, it is becoming increasingly difficult to land a permanently effective knock-out on any one of them.

A recent survey of one industry of some 40 different firms illustrates this quite definitely. Of the 40 only 10 depend absolutely on the one product for their existence. The remaining 30 had other products representing from 30 per cent to 95 per cent of their activities. Of the 10, four are owned by estates not entirely dependent upon them. Two are owned by individuals of sufficiently large means to carry on indefinitely even at unprofitable levels if necessary. One of the remaining four is being operated by a receiver and the others are so well connected with banking interests that it is doubtful if they would be allowed to remain long out of production even if forced for a time to operate unprofitably by some ruthless price-cutting firm that might undertake to monopolize the field.

No, it is practically impossible for a lone "fittest" or a few lone "fittests" to survive a "price-war". All survive but none or but few as "fit".

Price-cutting is almost always, in the beginning at least, simply accidental, unintelligent pricing and not deliberate warfare. Nor is this lack of intelligence confined to small irresponsible firms. It is just as apt to prevail in the largest and most highly organized industries. One of these was a constant source of irritation to an industry in which they were a large factor, but to which they contributed only a portion of their production. Complaints against them were so persistent and violent that they decided to have their methods of pricing reviewed to determine whether or not they might unintentionally be under-loading their costs. This proved to be the case to the extent of bringing about an addition of more than 60 per cent to the general overhead costs of this product that had formerly been charged to their other and more extensive lines. They had never had any intention of

quoting prices unfair to themselves and had done so only from the assumption that their figures indicated they could produce much more cheaply than others. Meantime their other products had been showing less favorable returns than they felt they should.

Examples of Unintelligence

Another equally large firm was approached in regard to a line of their manufacture that represented only about 5 per cent of their total output, but on which they were quite vigorously accused of selling at a loss to themselves and compelling firms dependent upon this line for their existence to sell at ruinous prices when in competition with them.

They asserted that they never intentionally sold at a loss, but admitted that they had not attempted to segregate the profits or even the selling and administration expenses of this line although carefully compiling their factory costs. When asked how they were sure of selling at a profit when they had neither of these factors specifically figured in their prices, they answered: "We know we can produce as cheaply as anyone in the business and we meet any price offered when we want that business."

This is not an uncommon and unintentional cause of unintelligent pricing and is apt to be aggravated by the smaller and less thoroughly organized firms, who assume that because the "big fellows" are figuring accurately, they are safe in quoting similar prices and even "nipping" under a bit to get their share of business, "of course, we can produce cheaper as we haven't their big overhead." Both, big firms and little ones, have very decided illusions in regard to their respective advantages. The small firm president says, "Look at the X Company! Their President gets $50,000 a year while I only draw $7,500." He ignores the fact that the X Company produces 40 times what he does, so that all of the officers' salaries combined do not equal the cost of his in the respective units of production. On the other hand the X Company tells you that "Y doesn't know his costs, while we figure ours out to the 4th and 5th decimal and know every day just what we are doing." They overlook that Y's business is so small that he does not need the same array of detail figures, as he is in such intimate personal contact with most of the details of his business. Both X and Y reach somewhere near the same conclusion as to the prices they ought to get, then each quotes below the other's price for the competitive business it wants, on pure assumption that each can produce and sell cheaper than the other. Here it is again, unintelligent pricing, pricing from assumption rather than knowledge, or from motives of retaliation and even vindictiveness. Is it a wonder that everybody loses?

Then there is the small man ambitious to get established and who is an easy mark for buyers whose job is to get goods as cheap as possible. An extreme case illustrating this factor in unintelligent pricing was that of the young man who had been a good factory manager, being suddenly offered the rental of a plant all equipped to run (but having been closed for over a year) at a very nominal figure, and a contract to take his production at prices to be agreed upon each month. He secured sufficient backing to get started, but the prices he offered to furnish the product for were not acceptable to the contractor so he was forced to go direct to the trade for his business. He found a buyer willing to give him sufficient business to enable him to run 24 hours per day for six months, if he could get the price down low enough. This he did, secured the contract, then found it necessary to run Sundays, as he expressed it, "to make my profit, as I only make my costs week days."

Of course, his price was ruinously low and invited retaliation measures from a very much larger firm that had formerly had the business and did not propose to let it be taken from them by such drastic cuts. They offered to "more than meet" any future price quoted. Fortunately, the young man got his lesson and refused to be caught again, but he had established a low price level hard to elevate.

It has already been shown that uniform costing is not a positive safeguard against unintelligent pricing, but to further show how the wrong system of a single detail even if adopted by two people in the same line can introduce unfair competition, the case of two firms of similar size in the same line who installed the same system is quoted. Both did approximately $200,000 worth of business. The system introduced convinced one firm that it had about 4 per cent advantage over the other in costs. While this seemed to be the case, a check-up revealed that the system of depreciation was making one firm charge off $8,500 per year and the other $450 for the same items. Here was a case of perfectly innocent price baiting that could have made a serious depression in price level.

Differences in Profit Ideals

Then there are the differences in profit ideals that cause differences in selling prices of similar articles made at similar costs. There is the firm whose owner may be of semi-philanthropic turn, and who is satisfied to make no profit whatever, while in the same industry there may be other firms whose stockholders demand that a reasonable dividend be earned on their investment; it is not uncommon to find this factor alone responsible for 10 to 15 per cent difference in what is considered fair selling prices. Of course, the whole industry is forced to a lower level of prices by the low profit ideals of its least ambitious members.

Even normally constituted firms have very different standards in regard to what should constitute satisfactory profits. One firm when asked to name the minimum satisfactory annual profit return for its business, will promptly quote $250,000 while a competitor of the same size will give $100,000 as entirely adequate.

Equally divergent ideals in regard to salaries also exist and it is interesting to note that ideals on profits and on salaries are usually parallel. The firm that aims for substantial profits is usually willing and able to pay equally substantial salaries, while those firms whose profit requirements are less ambitious are more apt to be sparing in their salary lists.

It likewise follows that the more ambitious firms are apt to be the more progressive, for even if they do not realize their profit ideals, they generally have more to spend upon improvements, experimental and development work and thus keep ahead of the procession.

Unfortunately, even the most progressive firms and those who most thoroughly and accurately know just what they should have in the way of fair prices for their products, are in all too many instances prevented from obtaining these prices because the general price levels of their industry are inadequate for fair return. They seek a way out by further cost reduction but no sooner effect one reduction than another comes up.

A typical case is that of a firm needing about $250,000 addition to their profits. They had made them in the past, but of recent years the profits had shrunk year by year until it was decided that some drastic cuts were necessary to restore the old level of earnings. When their engineers were given the problem to solve, they disclosed that it meant making a cut equal to 75 per cent of the pay-roll or an equal proportion of the overhead. Obviously both of these moves were impracticable and it was finally decided that the time had come to get dividends from customers.

From force of long established habits, the first place the average manufacturer looks to find his missing profits, is in his factory costs. He still finds opportunity to enhance these profits by cost reductions, but when cost reductions are dependent upon substantial enlargement of output, it is not always practicable to find the additional markets quickly.

When the problem is put up to the sales department, the latter says: "Give us low enough prices and we will fill your plant with orders." This they do perhaps for a short time by taking com-

petitors' business until the latter awaken to what is going on and "meet prices," whether they can afford to or not.

Then the "buck is passed" to the sales department and its members are accused of being "only order takers—there are no salesmen any more," the accuser overlooking the fact that he accepted the orders "taken" and even insisted that they "get the business somehow, but get it."

Summed up, the American manufacturer has been so busy developing products, methods of low cost production, and hunting for markets, that he has not given much thought to the question of adequate and equitable pricing. The most vital element in his success is given the most casual and off-hand attention. He orders a clerk to "add X per cent for profit" then tells his sales department to "shade it a bit if you have to" and trusts that all will come out all right; a bad year or two will soon be offset by good years. And so he goes optimistically on.

But he is beginning to realize that he must give this matter more intelligent consideration. Besides, his stockholders are beginning to demand something better than explanations for unsatisfactory returns. They want dividends, as a steady performance.

When our manufacturers undertake to solve this problem and correct the evil of unintelligent pricing, it will be corrected. A few industries are already at work upon it with good promise of ultimate success, and by methods that are thoroughly practical, simple, and quickly effective.

How can this be accomplished? It is being accomplished by combined individual education of members of an industry in economics, and by dissemination to the members, of general information in regard to their trade as a whole. These two elements are comparable to (1) screening the individual home against the intrusion of germ carrying insects, and (2) draining the breeding places of these pests to destroy them.

When every member of an industry is versed in sound economic principles in regard to pricing his products, he will not deliberately sell his goods at a loss. When he is fully informed as to the movement of products in his line, he will not be stampeded into quoting prices unfair to himself in efforts to obtain business he should not take.

The recent Supreme Court decision now permits him to join with his neighbors in draining the breeding places of unintelligent prices, and when he uses the same economically sound principles as all of his competitors in determining his own selling prices, then he has his individual business well protected.

Murray Bay Interests in New Mill

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 1, 1925.—It is reported here that Donohue Brothers, of Murray Bay, Que., are to enter the news print industry shortly. The mill at Murray Bay has a daily capacity of 120 tons of mechanical pulp. The new paper mill will have two news print machines and will probably be situated at Ste. Anne de Beaupre, because of the adequate electric power supply which is available from the Laurentian Power Company. The undertaking will be carried out in conjunction with the Geo. H. Mead Company, and it is likely that there will be an amalgamation of the Mead interests and the Donohue interests, whereby Donohue Brothers will look after the supply of wood, while the Geo. H. Mead Company will look after the making of the paper and its sale. Before constructing the mill, additional timber limits will be acquired; this is being undertaken by Geo. H. Mead Company. The acquisition of these limits is being held up due to the law-suit over the Bayless properties at Ste. Anne de Beaupre. When the matter of the limits has been finally settled, the decision as to the site of the news print mill will be made and construction will commence. When the amalgamation is completed, Donohue Brothers will not lose control of their property. It is not anticipated that there will be any public financing for the project—capital will be secured in New York through the Geo. H. Mead Company.

Action Against Bayless Paper Co. Dismissed

MONTREAL, Que., September 1, 1925.—One of the biggest legal actions ever entered in the courts of Quebec, involving $1,750,000 closed during the week when Mr. Justice Stein delivered judgment in the case of the Leaside Engineering Company of Toronto against the Bayless Pulp and Paper Company, and others of Binghamton, N. Y., and the First National Bank of Binghamton, and others, mis-en-cause. The judgment dismissed the action and attachment taken by the Leaside Engineering Company, with costs. Following this decision notice of discontinuance in the second action for $550,000 damages, taken by the Leaside Company against the Bayless Company, was filed in the Superior Court, and this is taken to mean that the Leaside Engineering Company will be quite satisfied to accept the decision handed down in the Superior Court by Judge Stein, and will not carry the matter to the Court of Appeal or any other tribunal.

The dropping of the second action and all consequent ending of the litigation between the two firms, leaves the Bayless Company free to complete its negotiations with the Mead Investment Company for the construction of a new pulp mill in Quebec Province at either Ste Anne de Beaupre or Beaupre at an estimated cost of between $3,000,000 and $5,000,000. Negotiations were under way between the two concerns when the Leaside Company sued the Binghamton firm and took a court seizure to prevent delivery of the shares before the case should have been fought out in court. It is now expected that plans will be completed in the very near future regarding the capitalization of the company and the site of the proposed mill. The Bayless Company, according to present plans, will turn over part of their Canadian assets to the Mead Investment Company, but will retain control in the new company.

The action taken by the Leaside Engineering Company arose out of an alleged understanding reached last spring between the Toronto Company and the Bayless Pulp and Paper Company, regarding acquisition of the Canadian assets of the Bayless Company, which consisted of the Beaupre Pulp and Paper Company and the Ste. Anne Pulp and Paper Company. The Leaside Company claimed that an understanding had been reached, whereas the Bayless people argued that only pourparlers had been entered into and that nothing of a definite nature had been agreed upon. The Bayless Pulp and Paper Company, in the meantime, entered into negotiations with the Mead Investment Company, connected with the Spanish River interests, regarding the formation of a company to build a new pulp mill in the vicinity of Beaupre, to cost between $3,000,000 and $5,000,000 and the Leaside Engineering Company took out a court seizure to prevent delivery of the shares of the Beaupre and Ste. Anne Pulp and Paper companies before the case had been argued before the courts. The case was argued during July and occupied about a week, after which it was taken en delibere. In the interval between the hearing of the case and the judgment, however, the Leaside Engineering Company took action for damages against the Bayless Pulp and Paper Company and others, and the First National Bank of Binghamton, and others for $550,000. This action has now been dropped.

Booklet on Endless Belts

A booklet on endless belts which has just been issued by the L. H. Gilmer Company, of Philadelphia, contains engineering data on all small belt drives, including discussion of belt speeds, ratio of pulley diameter to belt thickness, pulley flanges, crowning, take up etc. Although numerous treaties on large belt drives are available to the engineer, this is believed to be the first compilation of data specifically applying to small belt drives. Much of the information contained in the booklet has been worked out in the L. H. Gilmer Company's research laboratories and is now printed for the first time. The booklet is illustrated with numerous photographs showing the manner in which small belts have been applied to drives of exceptional character.

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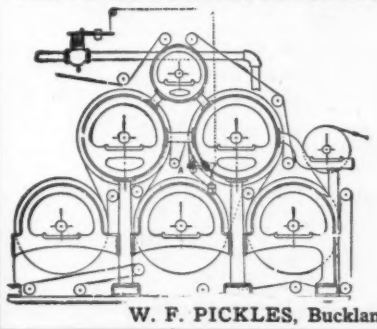

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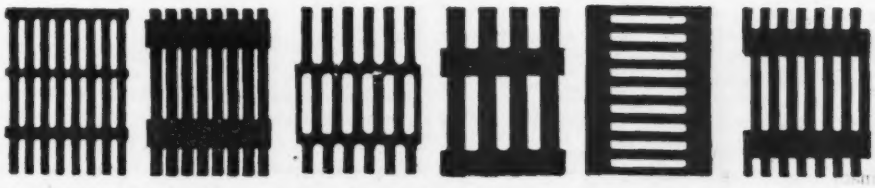

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SUMMARY

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Printing paper	146 cs., 236 rolls
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Cigarette paper	205 cs.
Surface coated paper	111 cs.
Writing paper	7 cs.
Filter paper	43 cs., 40 bls.
Paper hangings	50 bls., 7 cs.
Cover paper	4 cs.
Tissue paper	16 cs.
Wrapping paper	39 cs., 44 b'ls.
Parchment paper	6 cs.
Silk paper	2 cs.
Gold-coated paper	2 cs.
Baryta-coated paper	125 cs.
Surfaced paper	8 cs.
Metal paper	5 cs.
Paper Tubes	10 cs.
Spools of paper	24 cs.
Miscellaneous	281 cs., 30 pgs.

CIGARETTE PAPER

Liggett & Myers Tobacco Co., Waukegan, Havre, 13 cs.

P. J. Schweitzer, Pr. Garfield, Marseilles, 152 cs.

Standard Products Corp., La Savoie, Havre, 40 cs.

WALL PAPER

G. J. Hunken & Co., Inc., A. Ballin, Hamburg, 5 cs.

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Thomas & Pierson, Olympic, London, 1 cs.

A. C. Dodman, Jr., Inc., by same, 13 bls.

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A. C. Dodman, Jr., Inc., Franconia, Liverpool, 15 bls.

W. H. S. Lloyd & Co., Minnetonka, London, 4 cs., 13 bls.

W. H. S. Lloyd & Co., Caronia, Liverpool, 3 cs., 22 bls.

NEWS PRINT

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Titan Shipping Co., Mauretania, Havre, 26 cs.

P. C. Zuhlke, N. Amsterdam, Rotterdam, 50 cs.

C. Steiner, by same, 10 cs.

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Salomon Bros. & Co., N. Amsterdam, Rotterdam, 52 bls. rags.

E. J. Keller Co., Inc., by same, 72 b's. rags.

Chemical National Bank, by same, 43 bls. rags.

Atlas Waste Manufacturing Co., by same, 50 bls. rags.

J. Cohen Son Co., Caronia, Liverpool, 29 bls. paper stock.

Amsinck, Sonne & Co., by same, 23 bls. rags.

International Accep. Bank, La Savoie, Havre, 49 bls. rags.

Equitable Trust Co., by same, 90 bls. rags.

Brown Bros. & Co., Columbia, Glasgow, 116 bls. bagging.

National City Bank, by same, 230 bls. rags.

G. M. Graves Co., Karachi Maru, Hamburg, 98 bls. rags.

Barrett Co., by same, 337 bls. rags.

Darmstadt, Scott & Co., T. Fagelund, B. Aires, 61 bls. rags.

Maurice O'Meara Co., by same, 57 bls. rags.

E. J. Keller Co., Inc., Manchuria, Kobe, 420 bls. rags.

E. J. Keller Co., Inc., Carlier, Antwerp, 51 bls. bagging.

OLD ROPE

Brown Bros. & Co., Volendam, Rotterdam, 72 coils.

Brown Bros. & Co., Boston City, Bristol, 87 coils.

E. J. Keller Co., Inc., Oscar II, Copenhagen, 283 coils.

International Purchasing Co., Oscar II, Oslo, 99 coils.

Mechanics & Metals National Bank, Caronia, Liverpool, 11 coils.

MANILA ROPE

Ellermans' Wilson Line, Minnetonka, London, 31 coils.

Ellermans' Wilson Line, Caronia, Liverpool, 3 coils.

Republic Bag & Paper Co., Pr. Garfield, Manila, 1304 coils.

United Fiber Co., by same, 630 coils.

New York Cordage Co., Lapland, Antwerp, 59 coils.

WOODPULP

Ira L. Beebe & Co., Inc., Bremen, Bremen, 2841 bls. woodpulp.

J. Anderson & Co., Oscar II, Oslo, 1410 bls. woodpulp.

Tidewater Papermills Co., Sigdal, Liverpool, N. S., 12,311 bls. woodpulp, 1231 tons.

J. Anderson & Co., Erle, Hernosand, 3,000 bls. sulphate, 500 tons; 1,350 bls. sulphite, 225 tons.

Pagel, Horton & Co., Inc., by same, 1,500 bls. sulphite, 300 tons.

Perkins, Goodwin & Co., by same, 1,200 bls. sulphite, 200 tons.

International Accep. Bank, N. Amsterdam, Rotterdam, 850 bls. woodpulp.

(Continued on page 74)

A Remarkable Range of Grades, Textures and Weights

Orr Endless Felts can now be obtained up to 86 feet in length.

With our enlarged new equipment we can now furnish Paper Manufacturers with endless felts up to 86 feet in length.

Paper Manufacturers who carefully check manufacturing costs, and also strive to produce more and better paper at a lower cost per ton, prefer the unvarying quality and long service of ORR felts. A trial of them will bring about a preference that will be lasting.

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COTTON WASTE :: LINTERS :: RAMIE

FELTS
H. WATERBURY & SONS CO.
ORISKANY, N. Y.

Imports of Paper and Paper Stock

(*Continued from page 72*)

WOODFLOUR

A. Kramer & Co., Inc., N. Amsterdam, Rotterdarr, 400 bags.

CASEIN

T. M. Duche & Sons, Leighton, Buenos Aires, 1,918 bags.

T. M. Duche & Sons, T. Fagelund, Buenos Aires, 1,751 bags, 105,060 kilos.

Brown Bros. & Co., by same, 250 bags, 15,000 ki'os.

BALTIMORE IMPORTS

Week Ending August 29, 1925

Star Co., Trolleholm, Sweden, 500 rolls news print.

The Borregaard Co., Inc., by same, 7 bls. paper, 23 rolls paper.

National Bank of Commerce, West Inskip, Antwerp, 823 bls. rags.

National Bank of Commerce, Scyth'an, Antwerp, 1,361 bls. rags.

Pagel, Horton & Co., Inc., Erle, Hernosand, 2,100 bls. sulphite pulp, 400 tons.

J. Anderson & Co., by same, 2,100 bls. sulphite pulp, 350 tons; 2,700 bls. sulphate pulp, 450 tons.

Price & Pierce, Ltd., Erle, Wallvik, 3,390 bls. sulphite pulp, 565 tons.

Castle & Overton, Inc., Beemsterdyk, Rotterdam, 1,231 bls. woodpulp.

Castle & Overton, Inc., West Inskip, Rotterdam, 765 bls. woodpulp.

Scandinavian Pulp Agency, Inc., Trolleholm, Sweden, 127 bls. woodpulp.

Johanson, Wales & Sparre, Inc., by same, 1,960 bls. sulphate pulp; 619 bls. soda pulp.

E. M. Sergeant & Co., by same, 450 bls. soda pulp.

Lagerloef Trading Co., by same, 561 bls. woodpulp boards.

NORFOLK IMPORTS

Week Ending August 29, 1925

Castle & Overton, Inc., Blommersdyk, Rotterdam, 974 bls. woodpulp.

BOSTON IMPORTS

Week Ending August 29, 1925

Paper House of Penna., Karachi Maru, Hamburg, 69 cs. printing paper.

J. M. Whittall Associates, Blommersdyk, Rotterdam, 10 cs. spools of paper.

F. C. Bryan, Nevisian, London, 1 cs. paper.

1st National Bank of Boston, Daytonian, Antwerp, 194 rolls printing paper.

T. D. Downing & Co., by same, 30 bls. packing paper.

G. F. Malcolm, Hoosac, Liverpool, 6 cs. tissue paper.

Second Nat'onal Bank, Karachi Maru, Hamburg, 58 bls. rags.

Maurice O'Meara Co., T. Cagelund, B. Aires, 71 bls. rags.

Brown Bros. & Co., Egypt Maru, Hamburg, 85 bls. rags.

Fidelity International Trust Co., by same, 101 bls. rags.

Chemical National Bank, by same, 51 bls. rags.

Chemical National Bank, Blommersdyk, Rotterdam, 103 bls. rags.

Brown Bros. & Co., by same, 274 bls. rags.

Maurice O'Meara Co., by same, 43 bls. rags.

R. Blank, by same, 64 bls. rags.

G. M. Graves Co., by same, 56 bls. rags.

Merchants National Bank, Nevisian, London, 140 bls. rags.

First National Bank of Boston, by same, 69 bls. rags.

Furness, Withy & Co., by same, 11 bls. rags.

Crocker, Burbank Co., by same, 405 bls. wastepaper.

F. Leyland & Co., by same, 31 bls. rags.

American Express Co., by same, 44 bls. rags.

Philadelphia National Bank, by same, 120 bls. rags.

W. Schall & Co., by same, 53 bls. rags.

Anglo South American Trust Co., by same, 195 bls. rags.

J. T. Lodge & Co., by same, 2 b's. rags.

A. H. Searle, Inc., by same, 96 bls. rags, 118 bls. bagging.

W. Schall & Co., Daytonian, Antwerp, 158 bls. bagging.

Baring Bros. & Co., by same, 233 bls. rags.

Mechanics & Metals National Bank, by same, 146 bls. rags.

E. Butterworth & Co., Inc., by same, 112 bls. flaxwaste.

Lee Higginson & Co., by same, 55 bls. rags.

Spoulding Fiber Co., by same, 699 bls. flaxwaste.

G. M. Graves Co., by same, 43 bls. rags.

Chemical National Bank, by same, 40 bls. bagging.

G. M. Graves Co., Hoosac, Liverpool, 72 bls. bagging.

Linen Thread Co., by same, 76 bls. flaxwaste.

M. Salter Sons, by same, 6 bls. rags.

First National Bank of Boston, by same, 149 bls. rags.

J. T. Lodge, by same, 8 bls. rags.

T. D. Downing & Co., by same, 79 bls. rags.

Furness, Withy & Co., by same, 20 bls. paperstock.

E. J. Keller Co., Inc., West Harcuvar, Hamburg, 100 bls. rag pulp.

Atterbury Bros., Inc., T. Fagelund, B. Aires, 584 bags casein, 35,040 kilos.

First National Bank of Boston, by same, 417 bags casein, 25,020 kilos.

American Exchange National Bank, by same, 417 bags casein, 25,020 kilos.

Kalbfleisch Corp., by same, 834 bags casein, 50,040 kilos.

Kalbfleisch Corp., Leighton, B. Aires, 834 bags casein, 50,040 kilos.

Atterbury Bros., Inc., by same, 584 bags casein, 35,040 kilos.

Price & Pierce, Ltd., Erle, Waalvik, 6,500 bls. woodpulp.

J. Anderson & Co., Karachi Maru, Hamburg, 275 bls. woodpulp, 55 tons.

Castle & Overton, Inc., by same, 1,395 bls. woodpulp, 280 tons.

Ira L. Beebe & Co., Inc., by same, 619 bls. woodpulp, 123 tons.

Irving Bank Columbia Trust Co., by same, 1,330 bls. woodpulp, 206 tons.

Irving Bank Columbia Trust Co., Egypt Maru, Hamburg, 800 bls. woodpulp.

Ira L. Beebe & Co., Inc., by same, 715 bls. woodpulp.

Castle & Overton, Inc., by same, 470 bls. woodpulp.

Castle & Overton, Inc., Blommersdyk, Rotterdam, 127 bls. woodpulp.

PHILADELPHIA IMPORTS

Week Ending August 29, 1925

E. J. Keller Co., Inc., Isonzo II, Genoa, 141 b's. cottonwaste.

International Accep. Bank, Isonzo II, Naples, 107 bls. rags.

Brown Bros. & Co., Hog Island, Naples, 71 bls. rags.

Castle & Overton, Inc., Karachi Maru, Hamburg, 224 bls. rags.

Brown Bros. & Co., by same, 140 bls. rags.

The Stone Bros. Co., Inc., by same, 213 bls. rags.

Philadelphia National Bank, by same, 163 bls. rags.

S. Birkenstein Sons, by same, 187 bls. rags.

D. I. Murphy, by same, 160 bls. rags.

T. Kenworthy Sons, Davisian, Liverpool, 49 bls. rags.

J. B. Moors & Co., by same, 20 bls. rags.

J. L. Vandiver, by same, 233 coils old rope.

Philadelphia National Bank, by same, 43 bls. cottonwaste.

J. B. Moors & Co., London Exchange, London, 321 bls. rags.

Mechanics & Metals National Bank, by same, 155 bls. rags.

Brown Bros. & Co., by same, 105 coils old rope.

G. Fenton & Co., by same, 63 bls. rags.

Equitable Trust Co., by same, 59 bls. wastepaper.

W. Schall & Co., by same, 88 bls. rags.

Philadelphia National Bank, by same, 120 bls. rags.

J. A. Steer & Co., by same, 78 coils old rope.

Brown Bros. & Co., Idarwald, Hamburg, 359 bls. rags.

E. J. Keller Co., Inc., by same, 971 bls. rags.

Union National Bank, by same, 54 bls. rags.

National City Bank, by same, 103 bls. rags.

A. W. Fenton, Inc., Idarwald, Hamburg, 79 bls. rags.

Salomon Bros. & Co., by same, 70 bls. rags.

Second National Bank, by same, 38 bls. rags.

Fidelity International Trust Co., by same, 141 bls. rags.

Castle & Overton, Inc., by same, 373 bls. rags.

New York Trust Co., Liberty Glo, London, 255 bls. rags.

Castle & Overton, Inc., Hannover, Bremen, 123 bls. rags.

Castle & Overton, Inc., Blommersdyk, Rotterdam, 56 bls. rags.

Castle & Overton, Inc., Idarwald, Hamburg, 475 bls. rags.

Castle & Overton, Inc., West Campgaw, Hamburg, 154 bls. rags.

Castle & Overton, Inc., Daytonian, Hamburg, 307 bls. rags.

Castle & Overton, Inc., Eastern Dawn, Antwerp, 32 bls. rags.

Castle & Overton, Inc., Hannover, Bremen, 165 bls. woodpulp.

J. Anderson & Co., Dania, Greaker, 1,350 bls. woodpulp.

Mechanics & Metals National Bank, Dania, Oslo, 2,000 bls. woodpulp.

NEW ORLEANS IMPORTS

Week Ending August 29, 1925

E. J. Keller Co., Inc., Meanticut, Antwerp, 158 bls. bagging.

Castle & Overton, Inc., Maryland, Havre, 501 bls. rags, 74 bls. wastepaper.

Trade Marks Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

SEAMAN PAPER COMPANY RADIUM ENAMEL—No. 206,259. Seaman Paper Company, Chicago, Ill. For enameled book paper.

REPRESENTATION OF A STAR and words THE HOWARD (Disclaimed)—No. 210,554. Hochschild, Kohn & Co., Inc., Baltimore, Md. For toiletpaper.

ASTEN—No. 212,171. V. Asten & Co., Eupen, Belgium. For felts for paper machinery.

No-So—No. 210,176. Herman Lissner, New York City. For tags.

OPENET—No. 216,525. Marshall Field & Co., Chicago, Ill. For fiber dinner bags.

Bureau of Standards Experiments With Fillers

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 2, 1925.—Experimental research completed at the Bureau of Standards throws new light on paper making. Special experiments on the paper making quality of pulverized fillers were made in the paper laboratories of the bureau. Paper is made of fibers, fillers, and sizing. Fillers, the powdered substances used to fill the spaces between fibers, give opacity, body, and finish as required for certain papers, such as book papers for which they improve the printing quality. The quality of the paper was found to depend upon the quantity of filler retained rather than the kind, although less of the more soluble materials was retained.

Asbestine, talc, clay, crown filler, and gypsum were tried out. None impaired the sizing process. Ten or twenty per cent of each were added in turn to different batches of pulp, and the resulting papers tested for weight, strength, color, opacity, finish, degree sized (non-absorbency) and amount of filler retained. Asbestine, talc, and clay, (the less soluble) gave similar results.

The scientific experiments at the Bureau are made to aid the paper maker to secure any desired quality through advance knowledge of the effects of the kind and amounts of the several ingredients, instead of by the hit or miss method of trial and error upon which he must rely when dependable data are lacking.

Thomas Paper Mfg. Co. to Make Paper by New Process

PORTLAND, Ore., August 27, 1925.—A new process of manufacturing paper designed to cut costs and to use materials which cannot now be used has been invented by Robert Thomas, 292 North 21st street. Mr. Thomas has formed a company to be known as the Thomas Paper Manufacturing Company which will manufacture paper under the new process on a large scale.

The capitalization has been set at $2,000,000.

Anthony Neppach, of Nicolai Neppach company, planing mill, has been elected vice-president and assistant secretary of the new company. Elmer W. Jones, of San Francisco, is secretary.

More than 15 per cent more paper is secured per ton of wood by using the new chemical formula and the tensile strength of the paper is 25 per cent higher than that of other papers, according to the inventor.

The new company is casting around for a location for its new plant and has several good offers open but as yet nothing has been decided upon. Construction of the plant is hoped for this year. Present offices of the company are at 292 North 21st street, where Mr. Thomas has his laboratory.

Red and yellow fir and pine wood may be used, according to Thomas, to make the best grade bond paper under his process. Under other processes only poor grade paper can be made from these woods.

Wheat and rice straw and flax refuse are other raw materials which can equally well be utilized by the new method.

Mr. Thomas has demonstrated his method at several large paper mills including the Oregon Pulp and Paper company, the Inland Empire mill, Millwood, Wn., and the Methodist Book concern at Chillicotte, Ohio.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., Septetmber 2, 1925.—The Government Printing Office will receive bids on September 9 for 58,469 pounds (305 reams) of various sizes first class chart paper. Bids will also be received on the same date for 1,810 pounds of 22½ x 28½—181, white index bristol board.

The Government Printing Office will receive bids on September 9 for 80,000 pounds of various sizes 30 per cent rag mimeograph paper.

The Government's Printing Office has received the following bids for 50,000 pounds of manila calendered tag board in 24" and 26¾" rolls; R. P. Andrews Paper Company at 7.25 cents and Lindemeyer & Harker, at 6.24 cents and 6.49 cents.

Rate Decision for Merrimac Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., Sept. 1, 1925.—A decision has just been rendered by the Interstate Commerce Commission in the case of the Merrimac Paper Company against the Boston & Maine Railroad. In their syllabus in this case the Commissioners say:

"Carload shipments of printing paper from Lawrence, Mass., to Long Island City, N. Y., during the period from January 30, 1922 to February 24, 1923, inclusive, found to have been overcharged. Reparation awarded.

"Rate applied on carload shipments of printing paper from Lawrence to Long Island City since August 14, 1923, found unreasonable and inapplicable. Reparation awarded and maximum reasonable rate prescribed."

Sioux Falls Paper Co. to Erect Building

SIOUX FALLS, S. D., August 27, 1925.—Ground was broken last week for the new $100,000 Sioux Falls paper company building at Eleventh street and First avenue. The Sioux Falls Construction company was given the general construction work, and Perkins & McWayne, local architects, will supervise the work. It is planned to have the building completed by January 1, it was announced by J. E. Smeed, vice-president of the company.

The building will be a three-story fireproof structure with 150 feet frontage on Eleventh street and extnding back 88 feet. It will be of re-enforced concrete. The new building was made necessary, officials have stated, by the firm's increasing business which is reaching out into many neighboring states.

West Canal at Appleton Being Repaired

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., September 1, 1925.—Repairs on the banks of West Canal, Appleton, which has served Appleton paper mills for over 50 years, are in progress. The West Canal and the middle dam at this place have had little repair work since they were built. Considerable strengthening of the banks was necessary by dirt filling and by raising the banks slightly. The conccete work at the entrance of the flumes of the canal has been completed. Last year a portion of one bank gave way and slid into the canal.

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, September 2, 1925.

The paper market has crossed the threshhold into September with every assurance that business in practically every grade will soon feel the revivifying effect of Fall. A little sprightlier action all along the line has been in evidence during the past week and this gives color to the roseate hopes of the paper men. Paper in all the grades is showing today a healthy condition, business in general is taking a forward look, prices are firm and there is no reason why the market should not enter immediately upon a prosperous period with a genuinely healthy demand. There is no question but that present day conditions, under normal circumstances, should develop in a spirited paper demand during the next few weeks. But the paper men are not exactly looking for any such spirited demand. They do expect to see stock moving on a broader basis and to be favored by a constant and consistent volume of business but they are not hopeful of seeing a spectacular demand developed even at this stage of the game. The only thing which is going to retard the market is a continuance of the super-cautiousness which is becoming a firmly-embedded characteristic of the average consumer. If he continues to be cautious to the extent that he has been cautious for months the market will continue to trail behind the pace which it should logically be able to maintain. Business in all lines is suffering from this excessive caution. It is a new development for the American business man and as long as buying is held rigidly to immediate needs, ignoring to a greater extent all future requirements, ments, business will continue in a constant and consistent course but will not be any more susceptible to record-making streaks than it is today. However, the consumer, as far as paper is concerned at any rate, will be obliged to let out his sails to some extent whether he wants to or not and so the business of the remainder of the year is bound to how steady improvement. Judging from the record of the year which has already been written, the remainder of the year can hardly fail to be at least a shade better than that which the market saw during the last four months of last year. Then the revival of business was very satisfactory during September but a reaction came speedily and business from then on did not justify the expectations. If that reaction can be avoided this year the market should make some most gratifying strides between now and January 1.

News print from now on will get back to its normal stride which it did not materially depart from all through the summer. The difference is, however, that the demand will be a natural demand whereas it has been to some extent an inflated demand. Newspapers will now regain their normal circulations which always suffer during the vacation period when people go away to the shore and mountains and do less reading. Circulation will no longer have to be held up by means of circulation contests, prize offers, etc. News print demand has been excellent all along and the consumption will start to hit up a little livelier pace now that September is here.

Box board is still improving. Fine papers are also showing betterment and there is a little better action in coarse papers. Paper specialties continue to enjoy an excellent demand and tissues are starting to sell better than they have been doing for some weeks.

Mechanical Pulp

The groundwood market just now is exhibiting a thoroughly healthy undertone. There is a medium demand, pulp moving fairly freely into the consuming channels. Most of the buying continues to be on a contract basis, the consumers steadily increasing their withdrawals and being now on their quota basis. Spot buying has broadened out a trifle and the outlook is one of genuine promise. The tendency of prices is to go higher and many believe that an upward revision is imminent.

Chemical Pulp

There is a firm tone to the chemical pulp market and the trend of prices is upward. Stock is moving in a satisfactory manner and the consumers are, for the most part, not only buying for their immediate needs but for a considerable period ahead. Frequent inquiries are being received and it is likely that the market will enjoy considerable of a spurt before the month is over.

Old Rope and Bagging

The demand for both old rope and bagging continues quiet. There is little volume to such orders as are received and while the number of these orders is fairly gratifying they do not bulk up well. Prices are not inclined to move in either direction and the indications are that the demand will continue to lag for some little time yet.

Rags

Rags are having a rather quiet time of it at this writing. Roofing rags which have been in excellent demand and which have been a fairly constant feature of the market have quieted down and the demand has slackened considerably during the week. September is bound to be an eventful month for rags. Just what will happen is a matter of conjecture but it is sure that the market is due to undergo a change. Collections have been more or less upset in their routine, the dealers are long in some line and very short in others. How well they will be able to respond to Fall orders depends more than anything else on the form that demand takes. Consumers have been buying too sparingly to be well fortified against any acceleration in demand and for that reason September should develop into what can be characterized as a buying month.

Waste Paper

The week has noted no substantial change in paper stock. Prices are hanging where they have been for some time with only an occasional change will not occur until more active trading moment but probably will not occur until more active trading stimulates the market somewhat. Dealers are holding out for the present prices and few are avaricious enough to cut the already low prices in order to secure business.

Twine

Twine is continuing in the rut it has been occupying so long. Its demand is slightly better but not enough so to cause any great encouragement. There will probably be only a lagging demand until the approach of the holidays brings a better feeling to the market even though that may be only of short duration.

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45 BROAD STREET, NEW YORK

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, September 2, 1925.

August has passed and September, the month which brings rejuvenation to business in general, has set in and, before another week is gone, the chemical men will begin to get a more or less definite idea of how well their hopes of Fall business are to be realized. It is too early as yet to get an accurate line on the volume of August business. It can be said, however, that the chemical demand has been of greater volume than was the case in August of last year. Some of the chemical men say that the excess has not been very great and others declare that it has been a material increase but, the really important fact is that they are all agreed that it has been better. The opening of September finds the market in a much sounder condition than was the case a year ago at this time. Then the market had not begun to catch its equilibrium after a period during which concession-making had been the rule rather than the exception. Then, too, the spirit of caution was rife to an unusual extent and it was weeks before anything like real confidence was noted. But, today, the tone of the market can be regarded as genuinely healthy. There has been more or less concession granting during the summer, it is true, but nothing to the extent that was seen last year. Consequently the market has at no time been demoralized and is in much better condition to face the Fall than it was in 1924. Cautious buying has again prevailed the past summer but the lines have not been drawn quite so rigidly and today there is a growing confidence in the future of business in general and as to what the future may be expected to bring. Especially is this confidence producing optimism in the chemical market. Prices are remaining at a standstill and, as stated a week ago, it will probably be late September and, perhaps, early October before the manufacturers deem the time ripe for the announcement of their 1926 schedules. Contract business is not only very good just now but spot buying, which has been pitifully slow, underwent a change for the better during the past week. There has also been an increase in the number of inquiries which indicates that consumers are now getting in line for some lively and spirited buying at an early moment.

BLANC FIXE.—The forerunner of what is expected to be an avalanche of business in blanc fixe came through during the past week. Consumers have been buying very cautiously and September 1 finds them with very little stock on hand and faced by the necessity of immediately replenishing the dwindling resources. Orders were more frequent the past week and were also of better volume and blanc fixe is apparently on the road to a satisfactory betterment during the present month. The pulp continues to be quoted at from $60 to $70 a ton and the powder at from $75 to $90 a ton.

BLEACHING POWDER.—The market, as far as bleach is concerned, continues firm. The demand is good and is showing a steady improvement. A somewhat similar condition exists as has already been referred to in the case of blanc fixe and as a result orders are taking on greater volume and greater frequency. The outlook may be regarded as very promising while the present demand is highly satisfactory. The price is holding at 1.90 cents a pound.

CAUSTIC SODA.—Caustic soda showed its first inclination to fall into line with the market's general betterment. Contract business held its own during the week and there seemed to be a little more spot-buying to help liven things up. September should tone this commodity up considerably. It is quited at from 3.10 to 3.15 cents a pound.

CASEIN.—Casein which has never ceased to enjoy a better than normal summer demand is holding as strong as ever. The demand bears all the marks of consistency and, while future betterment may be a matter of speculation, casein is certainly in no danger of a Fall slump. The price is 12½ cents a pound and that price is being rigidly held to at this time.

CHINA CLAY.—China clay has been doing so well right along that it is, perhaps, unreasonable to expect it to gather any further momentum thus early, but the consistent demand it continues to experience indicates that there is nothing ahead of it but betterment and that it is almost certain to enjoy a long period of superior business. While it has not showed any real improvement the past week there is no slackening of its pace and that is highly satisfactory to the Chnia clay men. The quotation on the imported grades is from $16 to $20 a ton and on the domestic grades, from $12 to $15 a ton.

CHLORINE.—Consumers of chlorine are not yet loosening up. Orders come in regularly but the consumers cut the volume sparingly and consequently the market in this commodity is not especially vigorous. The price, however, is being rigidly maintained and sooner or later the consumers will have to take a broader perspective of their requirements. The price remains at from $4.50 to $7.00 a pound in tanks.

ROSIN.—The excellent demand for rosin continues unabaited and the call, if anything, has been slightly better during the past week. The price is holding fairly steady, not fluctuating as much as it often does and favoring the high level of the month. At this writing the naval stores centers were quoting $10.15.

SALT CAKE.—Salt cake which started to show improvement a couple of weeks ago is forging ahead very acceptably and the dealers are looking forward to an energetic demand all through September. There is a general hope that the same price schedule will run over into 1926 but it cannot be learned how the manufacturers regard such a possibility. It is selling at from $16 to $17.

SODA ASH.—Soda ash is not doing anything to boast of. The lack of spot buying is holding it back in spite of the fact that contract business continues fairly satisfactory. An improvement is looked for but had not set in at this writing. The price asked on a flat basis at the works is 1.38 cents a pound.

SULPHATE OF ALUMINA.—While sulphate of alumina is still slow it is today in a slightly more favorable position than it occupied a week ago and it is the general impression that it will now go ahead and participate in some highly favorable business. Prices are being well maintained and it is said to be a hopeless task to look for concessions. The commercial grades are quoted at from 1.40 to 1.45 cents a pound at the Eastern Works while the iron free is bringing from 2.10 to 2.25 cents apound.

SULPHUR.—Contract removals of sulphur continue up to the quota stipulations and the sulphur men are making no complaint. The price is still from $19 to $20 a ton.

TALC.—Talc is doing a trifle better but the demand is still of a lagging sort. September, however, should help it get back some of its lost ground. The price remains at from $17 to $18.

Resumption of Beaver Board Dividends Likely

While officers of the Beaver Board company refuse to predict a probable date for the resumption of dividends on the preferred, the steady increase of earnings since early in 1923 leads well informed interests to believe that such a course will come under consideration at no very distant date. Among the factors contributing to such a belief is the statement from the company that several branches of the company, inactive for some time, are now operating on a favorable basis.

Earnings of Beaver Board companies this year have been substantially ahead of 1924, it is stated in authoritative quarters, with prospects that they will substantially exceed the figures reported last year. In 1924 Beaver Board earned $311,836 after all charges and interest requirements, the equivalent of $3.42 a share on the 91,121 shares of preferred stock.

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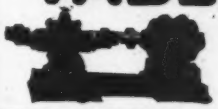
Fig. 510 illustrates Taber SL Double Suction Centrifugal Pump.
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Market Quotations

Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Abitibi Power and Paper, Gen. 6s 1940	101	103*
Advance Bag and Paper, 7s 1943	98	100*
Bastrop Pulp and Paper, 7½s 1932	104	108*
Brompton Pulp and Paper, 6s 1927	94	96
Beaver Board, 8s 1933	92	94
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Board, N. Y. Curb, 8s 1933	93	95
Beaver Products Corp., 7½s 1942	104	106
Belgo Canadian Paper, 6s 1943	100	101
Brown Paper Co., 8s 1931	102	...
Berlin Mills, 5s 1931	98	...
Bryant Paper Co., 6s 1942	99	102*
Brown Company Serial, 6s 1925-43	97	100
Central Paper 6½s 1925-42	91	94
Cape Breton Pulp and Paper, 6s 1932	100	...
Carthage Sulphite Pulp and Paper, 8s 1941	40	50
Champion Coated Paper Co., 6s 1924-34	...	102
Champion Fibre Co. Notes, 8s 1930	101	...
Cherry River Paper, 5s 1929	98	100*
Donnaconna Paper Co., Ltd., 6s 1940	99	101
Eddy Paper, 7½s 1931	97	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	87	95*
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co., 7s 1942	95	99
Eddy Paper Co., 7½s 1931	95	...
Gilbert Paper Co., 7s 1927	96	...
Gilbert Paper Co., 6½s 1923-29	101	102*
Hammermill Paper Co., 6s 1930-39	99	...
Hercules Corp'n, 8s 1936	100	...
Hummell, Ross Fibre Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1939	90	97
Kenmore Pulp and Paper Co., 6s 1937	90	...
Lake Superior Pulp and Paper, 6s 1941	105	...
Mattagami Pulp and Paper, 6s 1937	90	...
Marinette & Menominee, 7½s 1936	104	...
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 8s 1942	102	105
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	101	...
Paterson Parchment Paper, 5½s 1927-28	98	100
Paterson Parchment, 6s 1938	98	100
Parker Young Co., 6½s 1944	92	96
Price Bros. & Co. Ltd., 6s 1943	100	102
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Ser'es A, 8s 1940	115	118
Riordan Paper, 6s 1924	95	...
Riordan Pulp and Paper, Ltd., 6s, 1929	33	35
River Raisin Paper, 8s 1936	104	106
St. Maurice Paper Co., Ltd., 5½s, 1929	98½	99¾
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	98	100
Smith (Howard) Paper Mills, 6s 1934	98	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	88	92
Spanish River Pulp and Paper, 6s 1931	105	108
Spanish River Pulp and Paper, Gen 8s 1941	106	109
Ticonderoga Pulp and Paper Co., 6s, 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	88	93
S. D. Warren Company, 6s, 1945	97	100
Whittaker Paper, 1st 7s 1942	96	98
Watab Paper Co., 6½s 1942	100	104
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	87	90

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	65	68
Abitibi Power and Paper, Pfd	104	...
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd	77	...
Beaver Board, Com	4	6
Beaver Board, Pfd	32	35
Bryant Paper, Cap	12	...
Bryant Paper, Pfd	9	...
Chicago Mill & Lumber Co., Com	63	...
Chicago Mill & Lumber Co., Pfd	98	104
Crown Williamette, Com	93	98*
Crown Williamette, 7% A, Pfd	98	SW
Donnaconna Paper, Com	42	48
Donnaconna Paper, Pfd	93	98*
Great Northern Paper, Cap	260	270
Jessup & Moore Paper, Pfd	75	80
International Paper Co., Com	65	68
International Paper Co., Pfd. 6%	75	80
Mengel Company, Com	64	68
Mengel Company, Pfd	83	93
Oxford Papers, Com	93	97
Oxford Paper Co., Pfd	98	...
Provincial Paper Co., Com	94	98
Provincial Paper Co., Pfd	99	...
Price Brothers, Cap	39	40
St. Croix Paper	185	215
St. Maurice Paper Co., Cap	82	85
St. Regis Paper Co., Cap	54	56
Spanish River Pulp and Paper, Com	104	105
Spanish River Pulp and Paper, Pfd	115	117
Ticonderoga Pulp and Paper, Cap	145	...
West Virginia Pulp and Paper, Cap	44	47
West Virginia Pulp and Paper, Pfd	95	100
Whittaker Paper, Com	25	35
Whittaker Paper, Pfd	55	...

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00 @38.00
Bonds	9.00 @45.00
Writings—	
Extra Superfine	14.00 @32.00
Superfine	14.00 @32.00
Tub Sized	10.00 @15.00
Engine Sized	8.00 @11.00
News—	
Rolls, contract	3.50 @ 3.90
Rolls, transit	3.75 @ 4.25
Sheets	4.00 @ 4.25
Side Runs	3.25 @ 4.00
Book, Cased—	
S. & S. C.	7.00 @ 9.75
M. F.	6.25 @ 8.75
Coated and Enamel	8.00 @15.00
Lithograph	8.00 @15.00
Tissues—Per Ream	
White No. 1	.70 @ .90
Anti-Tarnish	1.10 @ 1.90
Colored	1.00 @ 2.00
White No. 2	.65 @ .75
Kraft	.85 @ .95
Manila	.70 @ .80
Kraft—	
No. 1 Domestic	5.50 @ 6.25
No. 2 Domestic	4.50 @ 5.25
Imported	5.50 @ 5.75
Manila—	
No. 1 Jute	9.00 @ 9.25
No. 2 Jute	7.75 @ 8.50
No. 1 Wood	4.75 @ 5.25
No. 2 Wood	4.00 @ 4.50
Butchers	3.50 @ 4.00
Fibre Papers—	
No. 1 Fibre	4.50 @ 5.00
No. 2 Fibre	4.25 @ 4.75
Common Bogus	2.50 @ 2.75
S. Screening	3.00 @ 3.50
Card Middles	4.00 @ 5.00
Boards—per ton—	
News	45.00 @47.50
Straw	57.00 @60.00
Chip	42.00 @45.00
Binders' Boards	72.50 @77.50
Sgl. Mla. Lt. Chip	58.00 @60.00
Wood Pulp	70.00 @75.00
Container	62.50 @67.50
Sulphate Screenings—	
Coarse	.75 @ .85
Refined	1.75 @ 2.00
Ground Wood—	
Screenings	20.00 @25.00
Glassine—	
Bleached, basis 25 lbs.	13.00 @16.00
Bleached, basis 20 lbs.	15.00 @16.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	33.00 @37.00
(F. o. b. Mill)	
No. 1 Domestic	28.00 @32.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—	
Bleached	4.00 @ 4.50
Easy Bleaching	3.00 @ 3.25
No. 1 strong unbleached	2.90 @ 3.25
No. 2 strong unbleached	2.55 @ 2.85
No. 1 Kraft	2.70 @ 2.85
Sulphate—	
Bleached	3.65 @ 3.85
(F. o. b. Pulp Mill)	
Sulphite (Domestic)—	
Bleached	3.85 @ 4.50
Easy Bleaching Sulphite	3.00 @ 3.25
News Sulphite	2.55 @ 2.80
Mitscherlich	3.25 @ 3.75
Kraft (Domestic)	2.75 @ 3.25
Soda Bleached	4.00 @ 4.25

Domestic Rags

New Rags

Prices to Mill f. o. b. N. Y.

Shirt Cuttings—	
New White, No. 1	14.25 @15.00
New White, No. 2	8.00 @10.00
Silesias No. 1	10.50 @11.50
New Unbleached	14.00 @15.00
Washables	6.50 @ 9.25
Fancy	9.75 @10.25
Blue Overall	10.00 @11.00
New Blue Prints	7.50 @ 8.50
New Soft Blacks	5.75 @ 6.20
Mixed Khaki Cuttings	7.00 @ 8.00
Pink Corset Cuttings	10.25 @10.75
Pink Muslin	10.00 @10.50
New Light Seconds	3.25 @ 3.50
O. D. Khaki Cuttings	7.00 @ 8.00
Men's Corduroy	6.25 @ 6.75
New Mixed Blacks	4.00 @ 4.50

Old Rags

White, No. 1—	
Repacked	6.50 @ 7.50
Miscellaneous	6.50 @ 7.00
White, No. 2—	
Repacked	4.25 @ 4.50
Miscellaneous	3.75 @ 4.25
St. Soiled, White	3.00 @ 3.50
Thirds and Blues—	
Repacked	4.00 @ 4.25
Miscellaneous	3.25 @ 3.50
Black Stockings	3.75 @ 4.25
Roofing Rags—	
Cloth Strippings	2.50 @ 2.75
No. 1	2.40 @ 2.50
No. 2	2.40 @ 2.50
No. 3	2.25 @ 2.50
No. 4	2.30 @ 2.40
No. 5A	1.50 @ 1.75

Foreign Rags

New Light Silesias	9.50 @10.50
Light Flannelettes	10.50 @11.50
Unbleached Cottons	14.00 @15.00
New White Cuttings	14.00 @15.00
New Light Oxfords	10.00 @11.00
New Light Prints	9.00 @10.00
New Mixed Cuttings	4.25 @ 4.50
New Dark Cuttings	4.25 @ 4.75
No. 1 White Linens	10.00 @11.00
No. 2 White Linens	7.25 @ 8.25
No. 3 White Linens	6.25 @ 6.75
No. 4 White Linens	4.50 @ 5.50
Old Extra Light Prints	4.25 @ 4.75
Ord. Light Prints	3.75 @ 4.25
Med Light Prints	3.75 @ 4.25
Dutch Blue Cottons	4.00 @ 4.50
Ger. Blue Cottons	3.75 @ 4.00
Ger. Blue Linens	4.25 @ 4.75
Checks and Blues	3.25 @ 3.50
Linsay Garments	2.50 @ 2.60
Dark Cottons	2.40 @ 2.50
Shoppery	2.30 @ 2.40
French Blues	4.00 @ 4.50

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—	
Foreign	3.15 @ 3.25
Domestic	3.15 @ 3.25
Wool Tares, light	2.50 @ 2.60
Wool, Tares, heavy	2.60 @ 2.70
Bright, Bagging	2.55 @ 2.65
Mixed Bagging	2.30 @ 2.40
Sound Bagging	2.10 @ 2.20
Roofing Bagging	2.00 @ 2.25
Manila Rope—	
Foreign	5.65 @ 6.00
Domestic	6.50 @ 7.00
New Bu. Cut	3.60 @ 3.85
Hessian Jute Threads—	
Foreign	4.00 @ 4.25
Domestic	3.25 @ 3.50

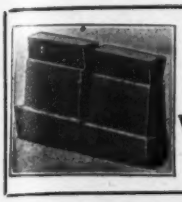
Old Waste Papers

(F. o. b. New York)

Shavings—	
Hard White, No. 1	3.50 @ 3.70
Hard White, No. 2	3.25 @ 3.50
Soft, White, No. 1	2.80 @ 2.90
Flat Stock—	
Stitchless	1.45 @ 1.55
Overissue Mag	1.25 @ 1.40
Solid Flat Book	1.25 @ 1.40
Crumpled No. 1	1.25 @ 1.35
Solid Book Ledger	1.70 @ 1.80
Ledger Stock	1.40 @ 1.50
New B. B. Chips	.65 @ .75
Manilas—	
New Env. Cut	2.25 @ 2.40
New Cut. No. 1.	1.85 @ 2.25
Extra No. 1 old	1.40 @ 1.50
Print	1.20 @ 1.30
Container Board	.70 @ .90
Bogus Wrapper	1.00 @ 1.10
Old Krafts Machine compressed bales	2.00 @ 2.10
News—	
No. 1 White News	1.85 @ 2.00
Strictly Overissue	1.05 @ 1.15
Strictly Folded	.75 @ .85
No. 1 Mixed Paper	.65 @ .70
Common Paper	.50 @ .55

Twines

Cotton—(F. o. b. Mill)—	
No. 1	.42 @ .45
No. 2	.41 @ .43
No. 3	.40 @ .42
India, No. 6 basis—	
Light	.19 @ .20
Dark	.17 @ .19
B. C., 18 basis	.39 @ .41
A. B. Italian, 18 Basis	.56 @ .61



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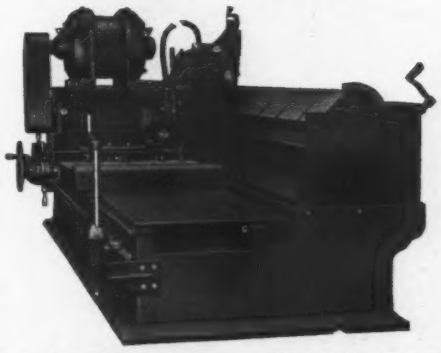

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Light, 18 basis	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.18	@	.20
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.15	@	.17
Fine Tube Yarn—			
5-ply and larger	.20	@	.23
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished India—			
Basis	.14	@	.15
Paper Makers' Twine			
Balls	.12	@	.13
Box Twine, 2-3 ply	.14	@	.15
Jute Rope	.20	@	.40
Ameri. Hemp, 6	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.14	@	.16
No. 2 Basis	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

CHICAGO

Paper

F. o. b. Mill

All Rag Bond	35	@	40
No. 1 Rag Bond	25	@	35
No. 2 Rag Bond	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond	7	@	10¼
Sulphite Ledger	9	@	12
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book	5½	@	7½
No. 1 S. & S. C. Book	6	@	7¾
Coated Book	7½	@	10
Coated Label	7½	@	10
News—Roll, mill	3½	@	4¼
News—Sheets, mill	3¾	@	4¾
No. 1 Manila	4½	@	5½
No. 1 Fibre	4½	@	5
No. 2 Manila	4	@	4½
Butchers' Manila	3¾	@	4¼
No. 1 Kraft	6	@	6½
No. 2 Kraft (Southern Grade)	4	@	4¼
No. 2 Kraft (Northern Grade)	5	@	5¼
Wood Tag Boards	4¼	@	6¼
Sulphite Screenings	3	@	3¼
Manila Tissue, 24x36 sheet	7¼	@	7¾
White Tissue, 20x30 sheet	7¼	@	7½

Boards, per ton—
(Delivered Central Territory)

Plain Chip	45.00	@	47.50
Solid News	47.50	@	50.00
Manila Line Chip	57.50	@	60.00
Container Lined—			
(Delivered Central Territory)			
85 Test	—	@	75.00
100 Test	—	@	80.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.15	@	3.25
White Envel. Cuttings	3.15	@	3.25
No. 1 Soft Shav.	2.85	@	2.95
No. 1 Mixed	1.45	@	1.50
No. 2 Mixed	1.15	@	1.20
Ledger and Writings	1.50	@	1.55
Solid Books	1.40	@	1.45
No. 1 Light Books	1.00	@	1.05
Blanks	1.90	@	1.95
Kraft	2.10	@	2.20
New Kraft Cuts	2.30	@	2.35
Manila Envelope Cuttings	2.40	@	2.50
Ex. No. 1 Manila	2.00	@	2.10
Print Manila	.90	@	.95
Folded News (overissue)	.85	@	.90
Old Newspapers—			
No. 1	.70	@	.75
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.70	@	.75
No. 2	.50	@	.55
Straw Clippings	.75	@	.80
Binders' Clippings	.70	@	.75
Roofing Stocks, f. o. b. Chicago, Net Cash—			
No. 1	47.00	@	52.00
No. 2	45.00	@	50.00
No. 3	43.00	@	48.00
No. 4	41.00	@	46.00

BOSTON

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.07½	@	.10½
Rag Content	.17	@	.45
All Rag	.36½	@	.51
Writings	.08	@	.20
Superfines	.22	@	.50
News	.04	@	.04½
Book, Super	.08	@	.10
Book, Coated	.09	@	.14
Coated Litho	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.12
Manila, Sul. No. 1	.05	@	.05
Manila, Sul. No. 2	.03¾	@	.04¼
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.05¾	@	.06
Common Bogus	.03½	@	.04
Straw Board	—	@	50.00
News Board	—	@	50.00
Chip Board	—	@	47.50
Single Manila Pulp lined board	55.00	@	60.00
Single White, patent coated board	75.00	@	82.50
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	3.75
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White	.04½	@	—
No. 2 Soft White	.03¼	@	—
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.00	@	1.75
Writing Paper	—	@	1.50
No. 1 Books, Heavy	1.25	@	—
No. 1 Books, Light	—	@	1.25
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.25	@	—
Overissue News	1.00	@	6.54
Old Newspapers	.70	@	5.54
No. 1 Mixed Paper	.60	@	.47½
Box Board, Chip	.60	@	.50

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.00
Domestic	—	@	3.00
Manila Rope	6.00	@	6.50
Mixed Rope	2.00	@	—
Scrap burlaps	—	@	2.37½
Wool Tares, heavy	—	@	3.00
Mixed Strings	—	@	1.90
New Burlap Cuttings	—	@	3.75

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.15½	@	.15
Silesias, No. 1	.11	@	—
New Unbleached	.14¼	@	.15
Washable	.07¾	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls	12½	@	—
New Black, soft	.07	@	—
Khaki Cuttings	.07	@	—
Corduroy	.04	@	.05
New Canvas	.12	@	.12½

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1	10.00	@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous	3.50	@	—
Roofing Stock—			
No. 1	3.00	@	—
No. 2	3.00	@	—
No. 3	2.50	@	—
No. 4	2.00	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, New 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph.	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila No. 2	.04	@	.04½
No. 2 Kraft	.05¼	@	.05¾
No. 1 Kraft	.06¼	@	.06½
Common Bogus	.02¾	@	—
Straw Board	56.00	@	55.00
News Board	Nominal	@	—
Chip Board	Nominal	@	—
Wood Pulp Board. (Carload Lots)	4.50	@	5.00
Binder Boards—			
Per ton	75.00	@	80.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	66.00	&	68.00
Slaters	70.00	@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply	2.10	@	2.15

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	3.00	@	3.25
Domestic	3.00	@	3.25
Manila Rope	4.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.00	@	1.25
Scrap Burlaps	2.25	@	2.50
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.25	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.75	@	—

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.60	@	2.70
No. 2 Soft White	2.00	@	2.20
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	1.00	@	1.10
Solid Ledger Stock	1.75	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.30	@	1.40
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	1.80	@	2.00
No. 1 Old Manila	1.60	@	1.75
Print Manila	1.25	@	1.35
Container Manila	1.00	@	1.10
Old Kraft	2.00	@	2.10
Over issue News	1.00	@	1.10
Old Newspaper	.70	@	.75
No. 1 Mixed Paper	.65	@	.70
Common Paper	.50	@	.60
Straw Board, Chip	.60	@	.65
Binders Bd., Chip	.60	@	.65

Domestic Rags—New
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13½	@	.14
New White, No. 2	.06½	@	—
Silesias, No. 1	.10½	@	.11
New Unbleached	.14	@	.14½
Washable	.07¾	@	.08¼
Fancy	.09½	@	.10
Cottons—according to grades—			
Blue Overall	.11	@	.11½
New Blue	.04	@	.04¼
New Black Soft	.06	@	.06¼
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.06½	@	.07
Corduroy	.04	@	.04½
New Canvas	.08¾	@	.09
New Black Mixed	.05	@	.05½

Old

White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05¼
Miscellaneous	.04¾	@	.05
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous	3.15	@	3.25
Black Stockings	4.25	@	4.50
Roofing Stock—			
No. 1	2.00	@	2.15
No. 2	1.90	@	2.00
No. 3	1.25	@	1.35
No. 4	1.10	@	1.20
No. 5A	1.10	@	1.15
B	1.05	@	1.10
C	1.00	@	1.05

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.10½	@	.12½
Light tinted	.11	@	.13½
Dark tinted	.12½	@	.15
Ledgers (sulphite)	—	@	.13
Ledgers No. 1	.36	@	—
Ledgers No. 2	.27	@	—
Writing	.09½	@	
Writing S. C.	.10	@	
News f. o. b. Mills—			
Rolls (carloads)	3.50	@	—
Sheets (carloads)	—	@	4.25
Sheets (2 tons or over)	—	@	4.60
Book—			
No. 1 M. F. (carloads)	8.00	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.50	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	29.00	@	30.00
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade	55.00	@	58.00
Sulphite, bleached	75.00	@	80.00
Sulphate	62.50	@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. cut	3.60	@	—
Soft White Book shavings	—	@	3.10
White Blk, News	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers	1.40	@	—
Manilas—			
New Manila Cut	—	@	1.60
Printed Manilas	1.00	@	—
Kraft	2.10	@	2.10
News and Scrap—			
Strictly Overissue	.80	@	—
Folded News	.80	@	—
No. 1 Mixed Papers	.55	@	—

Domestic Rags—
Price to mills, f. o. b. Toronto Per lb.

No. 1 White shirt cuttings	.14½	@	.14¾
No. 2 White shirt cuttings	.08	@	.08½
Fancy shirt cuttings	.09¾	@	.10
No. 1 Old Whites	—	@	—
Third and blues	—	@	—